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<b>(21) International Application Number:</b> PCT/US99/26835 <b>(22) International Filing Date:</b> 12 November 1999 (12.11.99)  <b>(30) Priority Data:</b> 60/108,270 12 November 1998 (12.11.98) US 60/110,262 30 November 1998 (30.11.98) US 60/110,491 1 December 1998 (01.12.98) US 09/356,268 16 July 1999 (16.07.99) US  <b>(71) Applicant:</b> UNITED VIDEO PROPERTIES, INC. [US/US]; 7140 South Lewis Avenue, Tulsa, OK 74136 (US).  <b>(72) Inventors:</b> RUDNICK, David, M.; 3049 South Adams Street, Denver, CO 80210 (US). ELLIS, Michael, D.; 1300 King- wood Place, Boulder, CO 80304 (US). HERRINGTON, W., Benjamin; 725 W. 20th Street, Tulsa, OK 74107 (US). WILLIAMSON, Steven, C.; 2720 S. Elder Avenue, Broken Arrow, OK 74012 (US). HARDY, Suzanne, D.; 9810 East Colorado Avenue, #210, Denver, CO 80231 (US).  <b>(74) Agents:</b> TREYZ, G., Victor et al.; Fish & Neave, 1251 Avenue of the Americas, New York, NY 10020 (US).		<b>(81) Designated States:</b> AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
<b>(54) Title:</b> PROGRAM GUIDE WITH INTERACTIVE INFORMATION DISPLAY SCREEN			
<b>(57) Abstract</b>  An interactive television program guide having interactive information display screens is provided. Interactive information display screens may be accessed by selecting an item. Interactive information display screens may include detailed information on the selected item or package and may include user-selectable options. The user-selectable options may be program guide features which have been configured to be exercised in specific connection to the selected item. The user-selectable options which are displayed depend on which program guide features are available to be exercised in specific connection with the selected item and depend on information which is associated with the selected item.			
<div style="display: flex; justify-content: space-between; align-items: center;"><div style="width: 40%;"><p>PROVIDE USER WITH AN OPPORTUNITY TO SELECT AN ITEM</p></div><div style="width: 55%; text-align: center;"><p>114</p></div></div> <div style="text-align: center; margin: 10px 0;">↓</div> <div style="display: flex; justify-content: space-between; align-items: center;"><div style="width: 40%;"><p>DISPLAY INTERACTIVE INFORMATION DISPLAY SCREEN HAVING DETAILED INFORMATION AND USER - SELECTABLE OPTIONS (E.G. A SET OF USER - SELECTABLE OPTIONS PROVIDED BASED ON WHICH ACTIONS ARE AVAILABLE)</p></div><div style="width: 55%; text-align: center;"><p>116</p></div></div>			

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PROGRAM GUIDE WITH INTERACTIVE  
INFORMATION DISPLAY SCREEN

Background of the Invention

This invention relates to interactive  
5 television program guide systems, and more  
particularly, to interactive television program guide  
systems having interactive information display screens.

Cable, satellite, and broadcast television  
systems provide a large number of television channels.  
10 Television viewers have traditionally consulted printed  
television program schedules to obtain programming  
information. More recently, electronic television  
program guides have been developed to allow television  
program information to be displayed on a viewer's  
15 television.

Interactive television program guides  
("program guides") typically offer program guide  
features to aid in viewer television operation. Some  
program guide systems include a program guide feature

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for displaying an information display screen for a specific program. The information display screens provided by such program guide systems are usually limited in the content and volume of information provided. For example, a typical information screen may contain a description of a selected program, but would not contain information on the channel or network for that program and would not contain information on program packages related to the program. In addition, program guide features such as features related to setting parental controls, setting reminders, selecting programs for recording, ordering programs, etc., are unavailable on information display screens that contain channel, network, or package information.

It is therefore an object of the present invention to provide a program guide that has an interactive information display screen.

It is also an object of the present invention to provide a program guide that has an interactive information display screen on which detailed information on a program or service is provided and on which there are a plurality of user-selectable features.

#### Summary of the Invention

These and other objects of the invention are accomplished in accordance with the principles of the present invention by providing a program guide having an interactive information display screen. The interactive information display screen may include a detailed description of a program, channel, network, package of programs, etc., and user-selectable options.



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A user may access the interactive information display screen by selecting a programming-related item such as a program, a channel, a network, or a program grouping (e.g., a purchasable package, a program series, a mini-series, a sports series, etc.). Other types of television content supported by the program guide may also be selectable items, if desired. When an item is selected (e.g., by pressing a remote control "info" key for more information), the program guide may display the interactive information display screen, which may have a detailed description of the selected item and user-selectable options. The options in the interactive information display screen are program guide features (e.g., record, parental lock, profile, e-mail, purchase, etc.) which are available for the selected item and which are to be exercised in specific connection with the selected item. The options available in an interactive information display screen may depend on which of the different items was selected in accessing the interactive information display screen and may further depend on the information associated with the selected item.

The interactive information display screen may include video, still images, advertisements, or status indicators. Video, still images, or advertisements may be selectable to access further program guide display screens.

The interactive information display screen is preferably accessible from any program guide display screen. The user-selectable options that may be provided when an interactive information display screen is accessed by selecting an item include: a parent control option, a preference profile option, a purchase

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option, a view option, a tune-to-channel option, a record option, an other channel/time option, an e-mail option, a web page option, a new option, a related network/channel option, a program grouping component  
5 option, a data service option, an application option, a favorites option, an exit option, a local service option, a last option, a reminder option, and a package option.

Depending on display-size limitations, the  
10 program guide may allow the user to scroll through options or information in order to display additional information or options that have not yet been displayed.

When displaying the interactive information  
15 display screen, the program guide may determine which user-selectable options are to be displayed for a selected item. This determination depends on the item selected (e.g., whether a program, network, channel, or other item was selected) and may further depend on  
20 information associated with the selected item (e.g., which program, which channel, which network, etc.). The program guide may rename options based on the selected item and based on information associated with the selected item.

25 The detailed information may include information on a program title, program description, cast, director, awards, reviews, ratings, duration, channel number, channel call numbers, network affiliation, channel air times, channel logo, category,  
30 channel name, etc.

Further features of the invention, its nature and various advantages will be more apparent from the

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accompanying drawings and the following detailed description of the preferred embodiments.

Brief Description of the Drawings

FIG. 1 is a schematic diagram of an illustrative data-relay architecture for a program guide system in accordance with the present invention.

FIG. 2 is a diagram of a client/server architecture for a program guide system in accordance with the present invention.

FIG. 3 is a diagram of a combined client/server and data-relay architecture for a program guide system in accordance with the present invention.

FIG. 4a is a diagram of illustrative program guide display screens and an illustrative interactive information display screen that may be provided when an interactive information display feature is selected in accordance with the present invention.

FIG. 4b is a diagram of an illustrative embodiment of an interactive information display screen for a program in accordance with the present invention.

FIG. 4c is a diagram of an illustrative embodiment of an interactive information display screen for a pay-per-view channel in accordance with the present invention.

FIG. 4d is a diagram of an illustrative embodiment of an interactive information display screen for a channel in accordance with the present invention.

FIG. 4e is a diagram of an illustrative embodiment of an interactive information display screen for a program in accordance with the present invention.

FIG. 5 is a flow chart of illustrative steps involved in providing a program guide interactive

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information display feature in accordance with the present invention.

FIG. 6a is a diagram of an illustrative program guide display screen, an illustrative  
5 interactive information display screen that may be provided when an item is selected for information, and an interactive information display screen that may be provided when a reminder option is selected in accordance with the present invention.

10 FIG. 6b is a flow chart of illustrative steps involved in providing an interactive information display screen having a reminder option in accordance with the present invention.

FIG. 7a is a diagram of an illustrative  
15 program guide display screen, an illustrative interactive information display screen that may be provided when an item is selected for information, and an illustrative display screen that may be provided when a view option is selected in accordance with the  
20 present invention.

FIG. 7b is a flow chart of illustrative steps involved in providing an interactive information display screen having a view option in accordance with the present invention.

25 FIG. 7c is a diagram of an illustrative display screen for a listing of music channels, and an illustrative interactive information display screen that may be provided when an item is selected in accordance with the present invention.

30 FIG. 7d is a diagram of an illustrative program guide display screen, an illustrative interactive information display screen that may be provided when a channel is selected for information,

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and an illustrative display screen that may be provided when a view option is selected in accordance with the present invention.

FIG. 8a is a diagram of an illustrative  
5 program guide display screen, an illustrative  
interactive information display screen that may be  
provided when an item is selected, and a display screen  
that may be provided when a tune-to-channel option is  
selected in accordance with the present invention.

10 FIG. 8b is a flow chart of illustrative steps  
involved in providing an interactive information  
display screen having a tune-to-channel option in  
accordance with the present invention.

FIG. 9a is a diagram of an illustrative  
15 program guide display screen, an illustrative  
interactive information display screen that may be  
provided when an item is selected, and an illustrative  
interactive information display screen that may be  
provided when a parental option is selected in  
20 accordance with the present invention.

FIG. 9b is a flow chart of illustrative steps  
involved in providing an interactive information  
display screen having a parental option in accordance  
with the present invention.

25 FIG. 10a is a diagram of an illustrative  
program guide display screen, an illustrative  
interactive information display screen that may be  
provided when an item is selected, and an illustrative  
interactive information display screen that may be  
30 provided when a purchase option is selected in  
accordance with the present invention.

FIG. 10b is a flow chart of illustrative  
steps involved in providing an interactive information

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display screen having a purchase option in accordance with the present invention.

FIG. 11a is a diagram of an illustrative program guide display screen, an illustrative  
5 interactive information display screen that may be provided when an item is selected, and an illustrative interactive information display screen that may be provided when an other channel/time option is selected in accordance with the present invention.

10 FIG. 11b is a flow chart of illustrative steps involved in providing an interactive information display screen having an other channel/time option in accordance with the present invention.

FIG. 12a is a diagram of an illustrative  
15 program guide display screen, an illustrative interactive information display screen that may be provided when an item is selected, and an illustrative interactive information display screen that may be provided when a profile option is selected in  
20 accordance with the present invention.

FIG. 12b is a flow chart of illustrative steps involved in providing an interactive information display screen having a profile option in accordance with the present invention.

25 FIG. 13a is a diagram of an illustrative program guide display screen, an illustrative interactive information display screen that may be provided when item is selected, and an illustrative interactive information display screen that may be  
30 provided when a program grouping option is selected in accordance with the present invention.

FIG. 13b is a diagram of an illustrative program guide display screen, an illustrative

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interactive information display screen that may be provided when item is selected, and an illustrative interactive information display screen that may be provided when a program grouping option is selected in  
5 accordance with the present invention.

FIG. 13c is a flow chart of illustrative steps involved in providing an illustrative interactive information display screen having a program grouping option in accordance with the present invention.

10 FIG. 14a is a diagram of an illustrative program guide display screen, an illustrative interactive information display screen that may be provided when item is selected, and an illustrative interactive information display screen that may be  
15 provided when a record option is selected in accordance with the present invention.

FIG. 14b is a flow chart of illustrative steps involved in providing an illustrative interactive information display screen having a record option in  
20 accordance with the present invention.

FIG. 15a is a diagram of an illustrative program guide display screen, an illustrative interactive information display screen that may be provided when an item is selected, and illustrative  
25 interactive information display screens that may be provided when a related network/channel option is selected in accordance with the present invention.

FIG. 15b is a flow chart of illustrative steps involved in providing an illustrative interactive  
30 information display screen having a related network/channel option in accordance with the present invention.

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FIG. 16a is a diagram of an illustrative program guide display screen, an illustrative interactive information display screen that may be provided when an item is selected, and illustrative  
5 interactive information display screens that may be provided when a related network option, a current program option, or an upcoming program option is selected in accordance with the present invention.

FIG. 16b is a flow chart of illustrative  
10 steps involved in providing an illustrative interactive information display screen having a related network option, a current program option, or an upcoming program option in accordance with the present invention.

15 FIG. 17a is a diagram of an illustrative program guide display screen, an illustrative interactive information display screen that may be provided when an item is selected, and illustrative interactive information display screens that may be  
20 provided when a web page option or a chat option is selected in accordance with the present invention.

FIG. 17b is a flow chart of illustrative steps involved in providing an illustrative interactive information display screen having a web page option or  
25 a chat option in accordance with the present invention.

FIG. 18a is a diagram of an illustrative program guide display screen, an illustrative interactive information display screen that may be provided when an item is selected, and an illustrative  
30 interactive information display screen with a status indicator in accordance with the present invention.

FIG. 18b is a flow chart of illustrative steps involved in providing an illustrative interactive



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information display screen having a status indicator in accordance with the present invention.

FIG. 19a is a diagram of an illustrative program guide display screen, an illustrative  
5 interactive information display screen that may be provided when an item is selected, and an illustrative interactive information display screen with an overlay that may be provided when an option is selected in accordance with the present invention.

10 FIG. 19b is a flow chart of illustrative steps involved in providing an illustrative interactive information display screen having an overlay in accordance with the present invention.

FIG. 20a is a diagram of an illustrative  
15 program guide display screen, an illustrative interactive information display screen having scrollable options that may be provided when an item is selected, and an illustrative interactive information display screen that may be provided when the options  
20 are scrolled in accordance with the present invention.

FIG. 20b is a flow chart of illustrative steps involved in providing an illustrative interactive information display screen having scrollable options in accordance with the present invention.

25 FIG. 21a is a diagram of an illustrative program guide display screen, an illustrative interactive information display screen that may be provided when an item is selected, and an illustrative display screen for program listings that may be  
30 provided when a program listing option is selected in accordance with the present invention.

FIG. 21b is a flow chart of illustrative steps involved in providing an illustrative interactive

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information display screen having a program listings option in accordance with the present invention.

FIG. 22a is a diagram of an illustrative program guide display screen, an illustrative  
5 interactive information display screen having an exit option, and an illustrative interactive information display screen having a last option in accordance with the present invention.

FIG. 22b is a flow chart of illustrative  
10 steps involved in providing an illustrative interactive information display screen having an exit or last option in accordance with the present invention.

FIG. 23a is a diagram of an illustrative program guide display screen, an illustrative  
15 interactive information display screen having scrollable information that may be provided when an item is selected, and an illustrative interactive information display screen that may be provided when information is scrolled in accordance with the present  
20 invention.

FIG. 23b is a flow chart of illustrative steps involved in providing an illustrative interactive information display screen having scrollable information in accordance with the present invention.

FIG. 24a is a diagram of an illustrative program guide display screen, an illustrative  
25 interactive information display screen that may be provided when an item is selected, and an illustrative interactive information display screen that may be provided when a favorite channel option is selected in  
30 accordance with the present invention.

FIG. 24b is a flow chart of illustrative steps involved in providing an illustrative interactive

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information display screen having a favorite option in accordance with the present invention.

FIG. 25a is a diagram of an illustrative program guide display screen, an illustrative  
5 interactive information display screen that may be provided when an item is selected, and an illustrative interactive information display screen that may be provided when a local channel option is selected in accordance with the present invention.

10 FIG. 25b is a flow chart of illustrative steps involved in providing an illustrative interactive information display screen having a local channel option in accordance with the present invention.

FIG. 26a is a diagram of an illustrative  
15 program guide display screen, an illustrative interactive information display screen that may be provided when an item is selected, and an illustrative interactive information display screen that may be provided when a program grouping component option is  
20 selected in accordance with the present invention.

FIG. 26b is a diagram of an illustrative program guide display screen, an illustrative  
interactive information display screen that may be provided when an item is selected, and an illustrative  
25 interactive information display screen that may be provided when a program grouping component option is selected in accordance with the present invention.

FIG. 26c is a flow chart of illustrative steps involved in providing an illustrative interactive  
30 information display screen having a program grouping component option in accordance with the present invention.

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FIG. 26d is a diagram of an illustrative interactive information display screen that may be provided when an item is selected in accordance with the present invention.

5           FIG. 27 is a flow chart of illustrative steps involved in providing an illustrative interactive information display screen having a graphic image, a video display, or an advertisement in accordance with the present invention.

10           FIG. 28a is a diagram of an illustrative interactive information display screen that may be provided when an item is selected and illustrative interactive information display screens that may be provided when an e-mail option is selected in  
15 accordance with the present invention.

FIG. 28b is a flow chart of illustrative steps involved in providing an illustrative interactive information display screen having an e-mail option in accordance with the present invention.

20           FIG. 29a is a diagram of an illustrative program guide display screen, an illustrative interactive information display screen that may be provided when an item is selected, and illustrative interactive information display screens that may be  
25 provided when a data service option or an application option is selected in accordance with the present invention.

FIG. 29b is a flow chart of illustrative steps involved in providing an illustrative interactive  
30 information display screen having a data service option or an application option in accordance with the present invention.

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FIG. 30a is a diagram of an illustrative program guide display screen, an illustrative interactive information display screen that may be provided when an item is selected, and illustrative  
5 interactive information display screens that may be provided when a video option is selected in accordance with the present invention.

FIG. 30b is a flow chart of illustrative steps involved in providing an illustrative interactive  
10 information display screen having a video option in accordance with the present invention.

#### Detailed Description of the Preferred Embodiments

An illustrative interactive television program guide system 50 in accordance with the present  
15 invention is shown in FIG. 1. Main facility 52 includes a program guide database 54 for storing program guide information (e.g., television program listings data, program-related information, channel listings data, channel-related information, network  
20 listings data, network-related information, package listings data, package-related information, pay-per-view ordering information, television program promotional information, program guide Internet-related information, etc.).

25 Main facility 52 preferably includes a processor to handle information distribution tasks. Information from database 54 may be transmitted in parallel via communication links such as communications link 58 to multiple television distribution facilities  
30 such as television distribution facility 56. Communications link 58 may be a satellite link, a telephone network link, an Internet link, a fiber optic

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link, a combination of such links, or another suitable communications path. Communications link 58 may pass through one or more facilities that are used to distribute television programming or other facilities.

5 Text, graphics, and video data may be transmitted over link 58. If it is desired to transmit video signals over communications link 58, a relatively high bandwidth link such as a satellite link may be preferable to a relatively low bandwidth link.

10           Television distribution facility 56 is a facility for distributing television signals to viewers, such as a cable system headend, a broadcast distribution facility, or a satellite television distribution facility.

15           The program guide information transmitted by main facility 52 to television distribution facility 56 includes television program listings data such as program times, channels, titles, descriptions, etc. Transmitted program guide information includes pay  
20 program data such as pricing information for individual programs and subscription channels, time windows for ordering programs and channels, telephone numbers for placing orders that cannot be impulse ordered, etc. Transmitted program guide information may also include  
25 a detailed description of program guide television content such as movie reviews, ratings, network affiliation, associated services, program director, cast, channel call letters, full channel name, air times, service description, logo, package title,  
30 package components, web links, e-mail information, chat information, video previews, merchandise information, still graphics, video, advertisements, etc. Television

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distribution facility 56 may include equipment for accessing and communicating on the Internet.

Television distribution facility 56 may distribute program guide information received from main facility 52 to user television equipment 61 via communications paths 60. User television equipment 61 may be any suitable equipment for providing television that contains sufficient processing capabilities to implement an interactive television program guide. If desired, user television equipment 61 may have sufficient processing capabilities to implement other applications such as e-mail or chat applications.

Communications paths 60 may be cable links, fiber optic links, satellite links, broadcast links, other suitable links, or a combination of such links. Any suitable communications scheme may be used to transmit data over paths 60, including in-band transmissions, out-of-band transmissions, digital transmissions, analog transmissions, cable transmissions, satellite transmissions, over-the-air transmissions, multichannel multipoint distribution services (MMDS) transmissions, etc.

Communications paths 60 preferably have sufficient bandwidth to allow television distribution facility 56 to distribute television programming, program listings information, advertisements, and other information to user television equipment 61. Multiple television and audio channels (analog, digital, or both analog and digital) may be provided to user television equipment 61 via communications paths 60. If desired, some of the data may be distributed to user television equipment 61 by one or more distribution facilities that are separate from television distribution facility

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56 using communications paths that are partly or completely separate from communications paths 60.

The data distribution technique that is used to distribute data on paths 60 may depend on the type  
5 of information that is being distributed. For example, text and graphics may be distributed over an out-of-band channel using an out-of-band modulator or distributed in the vertical blanking interval lines of an analog video channel. Video information may also be  
10 distributed in this way, although large quantities of video information may be more efficiently distributed using one or more digital channels on path 60. Such digital channels may also be used for distributing text and graphics.

15 Each user television equipment device 61 has a receiver which is typically a set-top box such as set-top box 62. A receiver may also be other suitable television equipment such as an advanced television receiver into which circuitry similar to set-top-box  
20 circuitry has been integrated, a personal computer television (PC/TV), or a personal computer with television capabilities (provided, for example, using a television tuner card). For illustrative purposes, the present invention will be described in the context of  
25 user television equipment 61 that uses set-top boxes.

Each set top box 62 preferably contains a processor to handle tasks associated with implementing a program guide application on set-top box 62. Each set-top box 62 may be connected to a videocassette  
30 recorder 66 or other recording device such as a digital recording device so that selected television programs may be recorded. For illustrative purposes, the present invention will be described in the context of



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videocassette recorder 66. Videocassette recorder 66 is typically connected to a television 68 or other display device. For illustrative purposes, the present invention will be described in the context of

5 television 68. To record a program, set-top box 62 tunes to a particular channel and sends control signals to videocassette recorder 66 (e.g., using infrared transmitter 70) that instructs video-cassette recorder 66 to start and stop recording at the appropriate

10 times.

During use of the interactive television program guide implemented on set-top box 62, television program listings, advertisements, programming information, and other information may be displayed on

15 television 68. The user may control set-top box 62, videocassette recorder 66, and television 68 using one or more remote controls or using any other suitable user input interface device such as a wireless keyboard, mouse, trackball, dedicated set of keys,

20 voice recognition system, personal digital assistant, display remote, etc. A remote control may be a display remote. When a display remote is used, the program guide may display interactive information display screens on the display screen of the display remote. A

25 display remote may include a touch pad for receiving user input. For example, a user may select options by touching specific active options on the display screen of the remote. Program guide systems with display remotes are described in United States provisional

30 application No. 60/138,868, filed June 11, 1999, which is incorporated herein in its entirety. For clarity, the present invention is described primarily in the context of a program guide system in which the user

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interface device is a remote control. A typical remote control 72 has arrow keys for controlling the position of a highlight region in a program guide display screen and a data entry key such as an OK, ENTER, or ACCEPT

5 key (hereinafter "OK key"). The remote control may also have other remote control keys such as an information "INFO" key, a record key, channel up or down keys, volume control keys, numeric keys, etc.

Certain program guide features, such as pay  
10 program purchasing, the purchasing of products or services, and data collection functions, may require that user television equipment 61 transmit data to television distribution facility 56 over communications  
15 paths 60. If desired, such data may be transmitted over telephone lines or other separate communications paths. If features such as these are provided using facilities separate from television distribution  
20 facility 56, some of the communications involving user television equipment 61 may be made directly with the separate facility (not shown).

Set top box 62 may have sufficient processing capabilities to support applications such as e-mail, chat, data services, video games, etc. User television equipment 61 may include equipment for recording  
25 portions of a video or for extracting an image from a video.

If desired, an illustrative interactive television program guide may be implemented using a data-relay architecture. In such an architecture,  
30 television distribution facility 56 may serve as a data relay site and user television equipment 61 may be a data destination site. For example, as television distribution facility 56 receives information from main

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facility 52, television distribution facility 56 may continuously or periodically distribute information to user television equipment 61. In a data-relay architecture, a program guide may be implemented on  
5 user television equipment 61 using a database at user television equipment 61 (e.g., database 64) for storing program guide information. Television distribution facility 56 may also poll set-top boxes periodically for certain information (e.g., pay program account  
10 information or information regarding programs that have been purchased and viewed using locally-generated authorization techniques).

The interactive television program guide system may be implemented using a client-server  
15 architecture or using a combination of data-relay and client-server architectures. An illustrative interactive television program guide system 80 that is based on a client-server architecture is shown in FIG. 2. As with system 50 of FIG. 1, program guide  
20 system 80 may include a main facility 52 having a program guide database 54. Because the system of FIG. 2 uses a client-server arrangement, the program guide is partially implemented on a server and partially implemented on a client. The server may be a  
25 server such as server 82. Server 82 may be at television distribution facility 84 or at another suitable location. The client may be based on user television equipment 61 (e.g., set-top box 88). At television distribution facility 84, program guide  
30 information may be stored and maintained in database 86. Database 86 may be accessed by a client (e.g., set-top box 88) as needed. For example, set-top box 88

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may transmit a message to server 82 requesting a specific video clip for the program guide.

An illustrative interactive television program guide system 90 that uses a combination of client-server and data-relay architectures is shown in FIG. 3. In such a combined architecture, the program guide may be partially implemented on a server and partially implemented on a client. Television distribution facility 94 may continuously (or periodically) relay a portion of program guide information to user television equipment 99. User television equipment 99 may include database 96 for storing program guide information. Television distribution facility 94 may include server 91 and database 93 for storing a portion of program guide information received from main facility 52. Program guide data stored in database 93 may be distributed to user television equipment 99 as needed. Interactive television program guide systems such as system 90 may also be implemented in a more fully server-based architecture if desired.

The server 91 at the television distribution facility 94 may use database 93 for storing program guide information, as well as graphics, displays, or other software involved in producing program guide displays on user television equipment 99. User television equipment 99 may receive inputs from the user requesting access to certain user television equipment features, operations, or data. The television distribution facility 94 may execute instructions necessary to implement desired features to support the desired operations, or to provide data access or the television distribution facility 94 may

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operate in conjunction with user television equipment 99 to execute the instructions necessary to implement the desired features to support the desired operations or to promote access to the desired data. Examples of  
5 program guide systems with on-demand data supplementation capabilities are provided in Ellis et al. U.S. patent application Serial No. 09/330,519, filed June 11, 1999, which is hereby incorporated by reference herein in its entirety. Examples of program  
10 guide systems with continuous data streams and client/server data supplementation capabilities are provided Hassell et al., U.S. patent application Serial No. 09/332,625, filed June 11, 1999, which is hereby incorporated by reference herein in its entirety.

15 For clarity, the present invention is sometimes described primarily in the context of program guides that are implemented primarily on user television equipment rather than in the context of program guides that are implemented using a server-  
20 based architecture.

As shown in FIG. 4a, the program guide of the present invention may display illustrative program guide display screens 100, 104, 106, 686, and 688 and illustrative interactive information display screen  
25 102. Display screen 100 contains program listings and corresponding channel identifiers in a grid format. Display screen 104 contains a list of packages and a corresponding network identifier. Display screen 106 contains a program category or genre such as sports,  
30 comedy, movies, news, etc. and a corresponding list of programs. Screen 108 may include video of a program. Screen 108 may be a program guide display screen provided by the program guide or may contain a

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television program provided by the user television equipment when the guide is running in the background. The program guide may display other program guide display screens for displaying program listings or  
5 identifying channels (e.g., an overlay including a list of music channels in program guide display screen 686), networks, packages, program groupings (e.g., a program grouping list in program guide display screen 288). Display screens may be partial or full screen and the  
10 information displayed therein may be sorted. Additional illustrative interactive information display screen are displayed in FIG. 4b, FIG. 4c, FIG. 4d, and FIG. 4e.

A user may select a programming-related item  
15 from program guide display screens such as display screens 100, 104, 106, 108 (if screen 108 is provided by the program guide), 686, and 688 where a program-related item is a program listing, channel, network, or a program grouping (e.g., a package, program series,  
20 mini-series, sports series, etc.). As defined herein, a program-related item (also called simply an item) may also be any other category of television content being provided through the program guide. A television program not being provided by the guide may also be a  
25 program-related item in the sense that this program may be selected by the user with the program guides. Each item may identify or be related to a specific program, channel, network, etc. Each specific item may have information associated therewith such as a detailed  
30 description of the specific item (e.g., program title, rating, channel identifier, related e-mail address, related web page address, program description, network affiliation information, program grouping components,

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related chat sessions, actors, directors, showing time, other showing times or channels, etc.). The information may have been provided as part of the program listings data supplied to the user television  
5 equipment. The information may be in a format suitable for display and may be in a format that is suitable for processing to determine the characteristics of the specific item.

An item may selected by, for example,  
10 positioning a highlight region on program listing and pressing an INFO key, positioning a highlight region on a channel grid cell in a program listings display screen and pressing an INFO key, pressing an INFO key while viewing a program, positioning a highlight region  
15 on a portion of program guide display screen identifying a music channel and pressing an INFO key, positioning a highlight region on a program grouping listing in a favorite program groupings display screen and pressing an INFO key, positioning a highlight  
20 region on a network identification in a network listings display screen and pressing an INFO key, etc. An item may be selected from any suitable program guide display screen which includes selectable portions. In addition, a program item may be selected by selecting a  
25 screen containing a television program.

The program guide may display different interactive information display screens depending on the item selected (e.g., whether a program listing, channel, network, program grouping, or program was  
30 selected to access the interactive information display screen). The options in an interactive information display screen are program guide features (e.g., record, parental lock, profile, e-mail, purchase, etc.)

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that are available for the selected item and that may be exercised specifically in connection with the selected item. The options available in an interactive information display screen may depend on which of the  
5 different items have been selected to access the interactive information display screen and may further depend on the information associated with the selected item. For example, the interactive information display screen that is displayed when a program listing is  
10 selected (e.g., screen 102 of FIG. 4a) is different from the interactive information display screen that is displayed when a channel is selected (e.g., the interactive information display screen of FIG. 4d).

When a user selects an item, the program  
15 guide may display an interactive information display screen such as interactive information display screen 102 of FIG. 4a. Interactive information display screen 102 may include detailed information portion 110 and may include a set of user-selectable options 112.  
20 Interactive information display screen 102 may also include other information such as graphic images, video, advertisements, status indicators, graphic animation, etc.

The content of interactive information  
25 display screen 102 may depend on whether a program, channel, network, program grouping, or other item was selected. For example, detailed information portion 110 may include several lines of text providing information appropriate for display for a program which  
30 may include program-content related information such as plot, actors, ratings, reviews, director, channel number, other showings, program category, etc. User-selectable options 112 may include options that may



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depend on which type of item is selected and the information associated with the selected item.

Depending on the volume of information to be displayed, the user may be provided with an opportunity  
5 to scroll to detailed information portion 110. A user may be allowed to scroll through (e.g., scroll up or down) information by pressing up or down arrow keys or other suitable navigation keys on a remote control. Detailed information portion 110 may include one or  
10 more arrows such as arrow 105 to indicate that the user may scroll to view more information. Detailed information 110 may provide sufficient information to allow a user to exercise (i.e., use or invoke) user-selectable options 112 in an informed way.

15 Scrolling may be provided for user-selectable options 112 depending on the number of user-selectable options that are available in connection with the selected item. A user may be allowed to scroll to options which are available but not yet displayed by  
20 pressing left or right arrow keys or other navigation keys on a remote control. User-selectable options 112 may include arrows such as arrow 103 to indicate that the user may scroll to more options.

The options available in the region of screen  
25 102 that is provided for user-selectable options 112 may depend on the nature of the selected item and the information associated with the item. The particular options that are provided may be those needed to exercise certain program guide features that are  
30 available for the item that was selected. A program guide user may select an option by positioning a highlight region on a desired option and using arrow keys pressing an OK key.

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Illustrative steps involved in providing an interactive information display screen such as interactive information display screen 102 of FIG. 4a are shown in FIG. 5. At step 114, the program guide  
5 may provide a user with an opportunity to select an item for additional information. The program guide may provide the user with an opportunity to select an item to receive additional information from any program guide display screen that includes an identifier for an  
10 item or from any screen that includes video for an item. The opportunity to select an item may be provided to a user from various program guide display screens such as a program listings display screen, a favorite programs display screen, a genre display  
15 screen, etc. An interactive information display screen for a selected item may provide a user with the opportunity to select another item, which may be related to the selected item. The opportunity to select an item (e.g., a program item) may also be  
20 provided to the user from a screen containing the video for a program.

At step 116, in response to the selection of an item, the program guide may display an interactive information display screen such as screen 102 of FIG.  
25 4a. The interactive information screen may include detailed information on an item. The user-selectable options may vary. The user-selectable options may be options for exercising program guide features that are available specifically in connection with the selected  
30 item. In addition to depending on whether a program (program listing or program video), a channel, a network, a program grouping or other item has been selected, options may vary depending on which item

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(e.g., which program, which channel, which network, which program grouping, etc.) has been selected. For example, options for a program that is currently airing may differ from options for a program that will air tomorrow. Options and the availability of options are discussed further below.

User-selectable options for an interactive information display screen may include a reminder option. For example, as shown in FIG. 6a, interactive information display screen 120 includes a reminder option 122 along with four other options (parental lock option 124, preference profile option 126, record option 128, and tune-to-channel option 130). Interactive information display screen 120 may be accessed from program listings display screen 118 by selecting a desired program listing. As discussed above, a user may select a program listing by, for example, positioning a highlight region on a listing such as a listing for an episode of Seinfeld (as shown) and pressing an INFO key. In response, the program guide may display interactive information display screen 120, which includes a detailed description of the selected episode of Seinfeld and user-selectable options 122, 124, 126, 128, and 130.

Reminder option 122 may be selected by positioning a highlight region on reminder option 122 and pressing a remote control OK key. When reminder option 122 is selected, the program guide may display interactive information display screen 134, which may include the same detailed description of the Seinfeld episode and which may include reminder controls 136 for activating or deactivating a reminder to view the selected episode of Seinfeld. The reminder controls

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136 may also allow the user to set, delete, or modify a series reminders. Program guide systems with a series reminder capability are described in copending Knudsen et al. U.S. patent application Serial No. 09/330,792, filed June 11, 1999, which is hereby incorporated by reference herein in its entirety. If desired, interactive information display screens 120 and 134 may include one or more advertisements, such as advertisement 132. The reminder option may be made available when the selected item is a program, and more particularly, when the selected item is a program listing for a program that has not yet started airing. The way in which the reminder option is either available or not available depending on whether the selected item is a program listing is an example of how the options that the system makes available depend on the nature of the selected item.

Illustrative steps involved in providing an interactive information display screen having a reminder option such as interactive information display screen 120 of FIG. 6a are shown in FIG. 6b. At step 292, after a user has selected an item, the program guide may display an interactive information display screen containing additional information. Displaying the interactive information display screen in step 292, may involve the step of displaying a reminder option at step 300. For example, the program guide may display a reminder option when the program guide determines that the selected item is a program listing or a listing for a program grouping such as a series. At step 302, after the user has selected the reminder option and after this selection has been detected at step 300, the program guide may provide the user with an opportunity

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to set, cancel, or modify a reminder to view the item that was selected for more information.

An interactive information display screen may include a view option. For example, as shown in FIG.

- 5 7a, interactive information display screen 138 includes a view option 140 along with three other options (parental lock option 146, preference profile option 148, and record option 150). Interactive information display screen 138 may be accessed from program
- 10 listings display screen 142 by selecting a desired program listing. As discussed above, a user may select a program by positioning a highlight region on a listing such as a listing for an episode of Seinfeld (as shown) and by pressing an INFO key. When the
- 15 program listing is selected, the program guide may display interactive information display screen 138, which includes a detailed description of the program, the selected episode of Seinfeld, along with user-selectable options 140, 146, 148, and 150. View option
- 20 140 may be selected, for example, by positioning a highlight region on view option 140 and pressing a remote control key (e.g., an OK key). In response, the program guide may tune to the channel showing the selected episode of Seinfeld and may display video 154
- 25 of the program that is currently on that channel. View option 140 may be an option that is displayed when a selected program is being broadcast (aired), is about to be broadcast, or is available on-demand (e.g., using video-on-demand or near video-on-demand. For digital
- 30 music programs, an option similar to the view option called "listen" option may be provided to the program guide. If desired, interactive information display screen 138 may include an advertisement 152.

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Illustrative steps involved in providing an interactive information display screen having a view option such as interactive information display screen 138 of FIG. 7a are shown in FIG. 7b. At step 292, after a user had selected an item, the program guide may display an interactive information display screen. The step of displaying an interactive information display screen, step 292, may include the step of displaying a view option at step 296. Step 296 may involve detecting whether a program, channel, or network item has been selected and may involve renaming the display name for the option. The program guide may display a view option when the program guide determines that a channel, a network, or a program that is being broadcast, is about to be broadcast, or is available on-demand has been selected for more information. If the selected item is a digital music program, the program guide may effectively "rename" the option, from "view" to "listen", as shown in FIG. 7c. At step 316, after a user has selected a view option from the interactive information display screen, the program guide may tune to the channel airing the selected program so that a video of the selected program may be displayed. When the selected program is a digital music program, the program guide may tune to the appropriate music channel and play music programming (e.g., see FIG. 7c). When a user accesses the interactive information display screen by selecting a channel or network, selecting the view option from the interactive information display screen may cause the program guide to tune to the selected channel or network as shown in FIG. 7d.

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An interactive information display screen may include a tune-to-channel option. For example, as shown in FIG. 8a, interactive information display screen 156 may include a tune-to-channel option 158 along with eight other options (record option 162, view option 164, reminder option 166, parental lock option 168, package option 170, preference profile option 172, and other channel/time options 174 and 176). The program guide may display interactive information display screen 156 when a user presses a key such as an INFO key to select a program listing such as a program listing for Seinfeld from program listings display screen 160. Interactive information display screen 156 includes a detailed description of the selected episode of Seinfeld along with user-selectable options 162, 164, 166, 168, 170, 172, 174, and 176. When a user selects tune-to-channel option 158, the program guide may tune to the channel that is scheduled to air the selected episode of Seinfeld and may display video 178 of the program currently being aired on that channel. Tune-to-channel option 158 may be an option that is displayed when the selected item is a future program.

Unavailable options are not typically displayed. For example, a view option would not be available for a selected program that is to be broadcast in the future. If desired, user-selectable options that are unavailable may be displayed but displayed differently. For example, as shown in FIG. 8a, the view option 164 may be dimmed or otherwise visually distinguished from the other options, because the selected episode of Seinfeld is not yet available to be viewed.

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Illustrative steps involved in providing an interactive information display screen having a tune-to-channel option such as interactive information display screen 156 of FIG. 8a are shown in FIG. 8b. At  
5 step 292, after a user has selected an item, the program guide may display an interactive information display screen. The step of displaying an interactive information display screen, step 292, may include the step of displaying a tune-to-channel option at step  
10 304. Step 304 may involve detecting whether a program channel, or network has been selected. The program guide may display a tune-to-channel option when the program guide determines that the selected item is a program, channel, or network. At step 324, after a  
15 user has selected the tune-to-channel option, the program guide may tune to the channel for the selected program, may tune to the selected channel, or may tune to a channel for the selected network.

An interactive information display screen may  
20 include a parental lock option. For example, as shown in FIG. 9a, interactive information display screen 180 may include a parental lock option 182 along with six other options (purchase option 186, reminder option 188, package option 190, profile option 192, record  
25 option 196, and other channel/time option 194). In operation, the program guide may display interactive information display screen 180 when a user selects Apocalypse Now for additional information from program listing display screen 184 (e.g., by pressing an INFO  
30 key). Interactive information display screen 180 may include a detailed description (e.g., a description containing information on plot, rating, director, awards, reviews, duration, etc.) for the selected



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program (Apocalypse Now) along with user-selectable options 182, 186, 188, 190, 192, 194, and 196.

When a user selects parental lock option 182, the program guide may provide the user with an opportunity to enter a personal identification code (e.g., using PIN overlay 185). When a user enters a valid code, interactive information display screen 198 may be displayed that includes the same detailed description of Apocalypse Now and that includes parental controls 200 for providing a user with an opportunity to set parental locks. If desired, parental controls may be displayed in an overlay, as discussed further below.

Illustrative steps involved in providing an interactive information display screen having a parental lock option such as interactive information display screen 180 of FIG. 9a are shown in FIG. 9b. At step 292, after a user selects an item, the program guide may display an interactive information display screen. The step of displaying an interactive information display screen, step 292, may involve the step of displaying a parental lock option (step 298). A parental lock option may also be called a parental control option or a parental option. A parental lock option may be displayed when the program guide detects that an item has been selected for more information. Step 298 may involve providing the user with an opportunity to enter a PIN. If a user selects a parental lock option, the program guide may provide the user with an opportunity to set or remove parental controls at step 318. For example, the program guide may provide the user with an opportunity to lock the selected program to prevent it from being viewed by

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those who cannot provide the password. The program guide may provide an opportunity to lock programs based on attributes of the selected program (e.g., the guide may allow the user to lock based on the rating of the  
5 selected program). When the selected item is a channel, network, or program grouping, the user may be provided with an opportunity to lock or unlock the selected channel, network, or program grouping (see, for example, FIG. 18a).

10 An interactive information display screen may include a purchase option. For example, as shown in FIG. 10a, interactive information display screen 202 may include a purchase option 204 along with six other options (reminder option 208, parental lock option 210,  
15 package option 212, profile option 214, and other channel/time options 216 and 218). In operation, the program guide may display interactive information display screen 202 when a user requests additional information on a selected program listing (e.g., by  
20 pressing an INFO key). For example, the user may press the INFO key after having highlighted Apocalypse Now in program listings display screen 206. Interactive information display screen 202 may include a detailed description (containing, e.g., information on plot,  
25 rating, director, awards, reviews, duration, etc.) for the selected program (Apocalypse Now) along with user-selectable options 204, 208, 210, 212, 214, 216, and 218. When a user selects purchase option 204, the program guide may display interactive information  
30 display screen 220. Screen 220 may include the same detailed description of Apocalypse Now as screen 202 and may include purchasing options 222 for providing the user with an opportunity to purchase a viewing of

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Apocalypse Now (e.g., by entering a code to complete a purchase, by entering an authorization code to view the program, etc.).

Illustrative steps involved in providing an  
5 interactive information display screen having a purchase option such as interactive information display screen 202 of FIG. 10a are shown in FIG. 10b. At step 292, after a user selects an item, the program guide may display an interactive information display screen.  
10 The step of displaying an interactive information display screen, step 292, may include the step of displaying a purchase option (step 306). The program guide may determine whether the purchase option is appropriate for the selected item (step 306a). For  
15 example, the display of a purchase option would be inappropriate when the selected item is a program, network, channel, or program grouping which is available for purchase. At step 326, after the user has selected a purchase option, the program guide may  
20 provide the user with an opportunity to purchase (or cancel the purchase of) the selected item. For example, the program guide may provide instructions to the user for telephone ordering (see for example FIG. 19a). Purchasing may involve impulse pay-per-view  
25 confirmation, video on demand confirmation, or telephonic ordering.

An interactive information display screen may include an other channel/time option. For example, as shown in FIG. 11a, interactive information display  
30 screen 224 may include an other channel/time option 226 along with four other options (a reminder option, a tune-to-channel option, a parental control option, and a record option). In operation, the program guide may

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display interactive information display screen 224 after a user has selected a program listing such as the program listing for "E.R." for additional information from program listings display screen 228. Interactive information display screen 224 may include a detailed description (e.g., plot, rating, director, awards, reviews, duration, etc.) of the selected episode of "E.R." along with five user-selectable options including other channel/time option 226. When a user select other channel/time option 226, the program guide may display information display screen 240, which includes a selectable list of other channel/times (230, 232, 234, and 236) for the selected program (E.R.) along with a detailed description 237 for an episode of E.R. A highlight region may be placed on each item in the list (230, 232, 234, and 236). In response, detailed description 237 dynamically changes to provide a detailed description for the E.R. episode in the list on which the highlight region is placed. When the list of other channel/times cannot be displayed due to size limitations, an arrow 231 may be displayed to indicate that the user may horizontally scroll the list so that items that are available but not yet displayed may be shown (e.g., see FIG. 20a). If desired, the program guide may display an other channel/time option for a specific other showing of the selected item (see for example, see FIG. 10a). When a user selects one of the other channel/time options (e.g., option 234), interactive information display screen 227 may be displayed. Interactive information display screen 227 may include a detailed description for the selected channel/time for the program and a set of user-selectable options for exercising program guide

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features in connection with the selected other channel/time. An option in an interactive information display screen that allows the user to access an interactive information display screen for another item  
5 may be considered to be a hyperlink.

Illustrative steps involved in providing an interactive information display screen having an other channel/time option such as interactive information display screen 224 of FIG. 11a are shown in FIG. 11b.  
10 At step 292, after a user has selected an item, the program guide may display an interactive information display screen. The step of displaying an interactive information display screen, step 292, may include the step of displaying an other channel/time option (step  
15 308). An other channel/time option may typically be available when the selected item is a program. At step 308a, the program guide may determine whether the other channel/time option is available for the selected program. For example, the other channel/time option  
20 may not be available for a program that does not have any other channel/time showings. At step 328, after a user has selected an other channel/time option, the program guide may display an interactive information display screen for the other channel/time showing of  
25 the selected program. Step 328 may include the step of providing the user with an opportunity to select from a list of other channel/times for the selected item.

An interactive information display screen may include a preference profile option. For example, as  
30 shown in FIG. 12a, interactive information display screen 244 may include a preference profile option 246 along with five other options (reminder option 250, tune-to-channel option 252, parental option 254, record

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option 256, and other channel/time option 258). In operation, the program guide may display interactive information display screen 244 when a user selects a program listing such as "E.R." for additional  
5 information from program listings display screen 248. Interactive information display screen 244 may include a detailed description (e.g., plot, rating, director, awards, reviews, duration, etc.) of the selected episode of "E.R." along with user-selectable options  
10 246, 250, 252, 254, 256, and 258. When a user selects preference profile option 246, the program guide may display interactive information display screen 260, which includes the same detailed description of the selected listing of "E.R." and may display user-  
15 selectable options 262 for adding attributes of the selected program to a user profile. If desired, user selectable options for adding attributes of the selected program to a user profile may be displayed in an overlay. A program guide preference profile feature  
20 is described in copending Ellis et al. U.S. patent application Serial number 09/034,934 filed March 4, 1998 which is hereby incorporated by reference herein in its entirety.

Illustrative steps involved in providing an  
25 interactive information display screen having a preference profile option such as interactive information display screen 244 of FIG. 12a are shown in FIG. 12b. At step 292, after a user has selected an item, the program guide may display an interactive  
30 information display screen. The step of displaying an interactive information display screen, step 292, may include the step of displaying a preference profile option (step 310). The preference profile option may

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be available when the program guide determines that the selected item is a program listing, program, a channel, or a network. At step 330, when the user selects a preference profile option, the program guide may

5 provide the user with an opportunity to add information to a user profile. For example, the program guide may allow the user to add an attribute (e.g., the genre) of a selected program listing (or program) to a user profile as a preference. For a network or a channel,

10 for example, the program guide may allow the user to add information indicating a preference for or against a network or a channel.

An interactive information display screen may include a program grouping option where a program

15 grouping may be a package, a program series, a mini-series, a sports series, etc. For example, as shown in FIG. 13a, interactive information display screen 264 may include a program grouping option named package option 266 along with three other options (reminder

20 option 270, purchase option 272, and parental control option 274). In operation, the program guide may display interactive information display screen 264 when a user selects the Truman Show from program listings display screen 268. When the user selects package

25 option 266, interactive information display screen 276 may be displayed, which includes a detailed description of a package that includes the Truman Show. If desired, a list of packages may be displayed which include the Truman Show as part of the package. In

30 addition to the detailed description, interactive information display screen 276 may include user-selectable options 277, 278, 279, and 280, which may be

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exercised in connection with the package (or packages) described in the detailed description 282.

As shown in FIG. 13b, interactive information display screen 424 may include a program grouping option 426 along with six other options (profile option 430, view option 432, program listing option 437, add-to-favorites option 436, purchase option 438 and parental lock option 440). In operation, the program guide may display interactive information display screen 424 when a user selects channel 5 from program listings display screen 428. When a user selects program grouping option 426, the program guide may display interactive information display screen 442. Interactive information display screen 442 may include a list of program groupings that include the earlier-selected channel as a component. After a user selects a program grouping from the list, the program guide may display an interactive information display screen that is appropriate for the selected program grouping. If desired, the list of program groupings may be scrollable (e.g., horizontally).

Illustrative steps involved in providing an interactive information display screen having a package option such as interactive information display screen 264 of FIG. 13a or interactive information display screen 424 of FIG. 13b are shown in FIG. 13c. At step 292, after a user has selected an item, the program guide may display an interactive information display screen. The step of displaying an interactive information display screen, step 292, may include step 312 for displaying a program grouping option (e.g., an option for accessing information on a program series, mini-series, sports series, or package containing the



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selected item). The program guide may determine whether a program, channel, or network has been selected and whether the selected program, channel, or network is part of a program grouping (312a). At step 5 332, after the user has selected a program grouping option, the program guide may display an interactive information display screen for a program grouping that includes the earlier selected program, network, or channel. Program guide systems that provide television 10 packages are described in Knudsen et al. U.S. patent application Serial No. 08/944,153, filed October 6, 1997, which is hereby incorporated by reference herein in its entirety.

An interactive information display screen may 15 include a record option. For example, as shown in FIG. 14a, interactive information display screen 224 may include a record option 226 along with five other options (reminder option 230, tune-to-channel option 232, parental control option 234, preference profile 20 option 236, and other channel/time option 238). In operation, the program guide may display interactive information display screen 224 when a user selects a program listing such as the program listing for the program "E.R." from program listings display screen 25 228. Interactive information display screen 224 may include a detailed description of the selected "E.R." episode along with user-selectable options 226, 230, 232, 234, 236, and 238. When the user selects record option 226, the program guide may display interactive 30 information display screen 240. Interactive information display screen 240 may include an overlay for exercising the program guide record feature in connection with the selected program. Interactive

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information display screen 240 may continue to include a detailed description of the selected "E.R." episode and the user-selectable options. If desired, the record options may be displayed as part of the display  
5 screen.

Illustrative steps involved in providing an interactive information display screen having a record option such as interactive information display screen 224 of FIG. 14a are shown in FIG. 14b. At step 292,  
10 after a user has selected an item, the program guide may display an interactive information display screen. The step of displaying an interactive information display screen, step 292, may include the step of displaying a record option (step 302). A record option  
15 may be available when the program guide determines that the user has accessed an interactive information display screen by selecting an item that is a program, a program listing, or a program grouping. At step 322, after a user has selected a record option, the program  
20 guide may provide the user with an opportunity to exercise a record feature of the program guide system (e.g., create, delete, or modify a recording) in connection with the selected program. If desired, the program guide system may create a recording of the  
25 selected program when the user selects the record option. The recording may be a series recording. Program guide systems with series recording capability are described in copending Knudsen et al. U.S. patent application Serial No. 09/330,792, filed June 11, 1999,  
30 which is hereby incorporated by reference herein in its entirety.

For example, the program guide may instruct a videocassette recorder to record the selected program.

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The user may also be provided with an opportunity to set, clear, or modify a recording at a server at a television distribution facility (e.g., television distribution facility 84 of FIG. 2) or other suitable location. A television distribution facility may include a remote media server for performing recording operations. Program guide systems having a record feature are described in Ellis et al. U.S. patent application serial No. 09/332,244, filed June 11, 1999, which is incorporated herein by reference in its entirety. The selected item may also be recorded on a local digital storage device or server. Program guide systems with local digital storage are described in Hassel et al. U.S. patent application serial No. 09/157,256, filed September 17, 1998, which is incorporated herein by reference in its entirety.

An interactive information display screen may include a related channel/network option. For example, as shown in FIG. 15a, interactive information display screen 702 may include a related network option 704 and a related channel option 706 along with two other user-selectable options. In operation, the program guide may display interactive information display screen 702 when a user selects a program listing such as the listing for program 5 from program listings display screen 700. Interactive information display screen 702 may include a detailed description of the selected program (program 5) along with the user-selectable options. Interactive information display screen 702 may include graphic image 701, which is discussed further below. When the user selects related network option 704, the program guide may display interactive information display screen 710. Interactive

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information display screen 710 may include a detailed description of a television network that is related to the selected program (program 5) and user-selectable options for exercising program guide features in connection with the network. When the user selects related channel option 706, the program guide may display interactive information display screen 712. Interactive information display screen 712 may include a detailed description of a television channel related to the selected program (program 5) and user-selectable options for exercising program guide features in connection with the channel. Related network option 704 and related channel option 706 are discussed and displayed together for convenience.

Illustrative steps involved in providing an interactive information display screen having a related network/channel option such as interactive information display screen 702 of FIG. 15a are shown in FIG. 15b. At step 292, after a user has selected an item, the program guide may display an interactive information display screen. The step of displaying an interactive information display screen, step 292, may include the step of displaying a related network/channel option (step 284). A related network/channel options may be available when the selected item is a program. At step 286a, after the user has selected a related network option, the program guide may display an interactive information display screen for the network. At step 286b, after the user has selected a related channel option, the program guide may display an interactive information display screen for the channel. The channel may be a television channel that is carrying the selected program (e.g., program 5 in FIG. 15a).

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The network may be a television network that is affiliated with the selected program or that is affiliated with a channel that carries the selected program.

- 5           An interactive information display screen may include a related network option, a current program option, or an upcoming program option. For example, as shown in FIG. 16a, interactive information display screen 550 may include a related network option 552, a  
10   current program option 554, and an upcoming program option 556 and one other user-selectable option. Interactive information display screen 550 may include video portion 558, which is discussed further below. In operation, the program guide may display interactive  
15   information display screen 550 when a user selects an item such as a channel (as shown) or a network from a program guide display screen. When the selected item is a network, interactive information display screen 550 may include a related channel option rather than a  
20   related network option. When the user selects related network option 552, the program guide may display interactive information display screen 560. Interactive information display screen 560 may include a detailed description for a television network related  
25   to the earlier selected channel (e.g., the channel is a network affiliate) along with user-selectable options for exercising program guide features in connection with the network. When the user selects current program option 554, the program guide may display  
30   interactive information display screen 562. Interactive information display screen 562 may include a detailed description for a current program on the channel (or a network if a network had been selected

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earlier) and user-selectable options for exercising program guide features in connection with the current program. When the user selects upcoming program option 556, the program guide may display interactive  
5 information display screen 564. Interactive information display screen 562 may include a detailed description for an upcoming program on the channel (or a network if a network had been selected earlier) and user-selectable options for exercising program guide  
10 features in connection with the upcoming program.

Illustrative steps involved in providing an interactive information display screen having a related network option, a current program option, or an upcoming program option such as interactive information  
15 display screen 550 of FIG. 16a are shown in FIG. 16b. At step 292, after a user has selected an item, the program guide may display an interactive information display screen. The step of displaying the interactive information display screen, step 292, may include the  
20 steps of displaying a related network option (step 566), displaying a current program option (step 568), or displaying an upcoming program option (step 570). The program guide may determine that the related network option is available by determining that the  
25 selected item is a channel. The program guide may determine that the current program or upcoming program options are available by determining that the selected item is a channel or a network. If the user selects a related network option, the program guide may display  
30 an interactive information display screen for a network related to the earlier selected channel at step 572. If the user selects a current program option, the program guide may display an interactive information

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display screen for the current program on the earlier selected channel or network at step 574. If the user selects an upcoming program option, the program guide may display an interactive information display screen

5 for an upcoming program on the earlier selected channel or network at step 576. The related network, current program, and upcoming program options are discussed together for convenience. These options may be displayed together, separately, or in combination.

10 An interactive information display screen may include Internet-related options such as a web page option, a chat option, or an e-mail option (which is discussed further below). For example, as shown in FIG. 17a, interactive information display screen 580

15 may include web page option 582, chat option 584 and three other user-selectable options. In operation, the program guide may display interactive information display screen 580 when a user selects an item such as a program or program listing. Interactive information

20 display screen 580 may include a detailed description of the selected item along with the user-selectable options. If the user selects web page option 582, the program guide may display interactive information display screen 588. Interactive information display

25 screen 588 may include a full or partial screen display 590 for a web page that is related to the selected item. The program guide may have launched a related application for web page viewing and may have provided a related web page address to the application to allow

30 the program-related web page to be displayed. If desired, before launching the web page viewing application, the program guide may display a list of web pages 581 related to the selected item to allow the

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user the opportunity to select a web page from the list. If the user selects chat option 584, the program guide may display interactive information display screen 592. Interactive information display screen 592 may include a partial or full screen display 594 for a chat session related to the selected program. The program guide may have launched a chat session application and provided the application with information on a program-related chat session to join or initiate. The program guide may provide the user with an opportunity to schedule a reminder to join a chat session that is related to the selected item.

Illustrative steps involved in providing an interactive information display screen having a web page option or a chat option such as interactive information display screen 580 of FIG. 17a are shown in FIG. 17b. After a user selects an item, the program guide may display an interactive information display screen at step 292. The step of displaying an interactive information display screen, step 292, may involve the steps of displaying a web page option (step 600) and displaying a chat option (step 602). The step of displaying a web page option may involve the step of determining whether a web page option is available for the user selection (e.g., determining whether a selected program has a related web page address). The step of displaying a chat option may involve the step of determining whether the chat option is available (e.g., determining whether a chat session application exists at a set top box).

If the user selects the web page option, the program guide may provide the user with an opportunity to view a web page related to the selected item at step



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606. This may involve providing the user with an opportunity to select from a list of web pages that are related to the selected item. A website may be displayed by launching a web browser and directing the web browser to retrieve a web page related to the program. The address of the web page to be retrieved may be provided as part of the program listings data supplied to the user television equipment.

If the user selects the chat option, the program guide may provide the user with an opportunity to engage in a chat session (e.g., display, join, initiate, schedule a reminder for a chat session or take other actions related to a chat session) at step 608. Chat-related data may be provided to the program guide as part of the program listings data supplied to the user television equipment.

The web page and chat options are discussed together for convenience. These options may be displayed together, separately, or in combination. Web page and chat options may be available when a user selects a channel, a network, a program grouping, a program or a program listing to access an interactive information display screen. Chat-related systems are described in DeWeese et al. U.S. patent application Serial No. 09/356,270, filed concurrently herewith and Ellis et al. U.S. patent application Serial No. 09/346,134, filed concurrently herewith, which are hereby incorporated by reference herein in their entireties.

An interactive information display screen may include a status indicator. For example, as shown in FIG. 18a, interactive information display screen 344 may include a parental lock status indicator 350. The

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program guide may display interactive information display screen 338 when a user selects package #2 from package listings display screen 342. Interactive information display screen 338 may include a detailed description of Package #2 and four user-selectable options including parental lock option 340. When a user selects parental lock option 340, the user may be provided with an opportunity to enter a personal identification code (PIN). When a valid PIN is entered, the program guide may display interactive information display screen 344, which includes the same detailed description of package #2 and the same options that were displayed in interactive information display screen 338. In addition, interactive information display screen 344 may include status indicator 350 for the parental lock option. Status indicator 350 may indicate to the user that package #2 is now locked. Status indicator 350 may be a part of the information displayed within the detailed description portion of an interactive information display screen. Status information for other program guide features such as purchase, reminder, recording features may also be provided with a status indicator.

Illustrative steps involved in providing an interactive information display screen having a status indicator such as interactive information display screen 344 of FIG. 18a are shown in FIG. 18b. At step 292, after a user has selected an item, the program guide may display an interactive information display screen. The step of displaying an interactive information display screen, step 292, may involve the step of displaying a status indicator (step 341). The program guide may determine the status for certain

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program guide features in connection with a selected program, network, channel, or package. For example, the program guide may determine whether a selected program has been purchased or locked. The status  
5 indicator may be integrated into the detailed description portion of an interactive information display screen.

An interactive information display screen may include further options in an overlay. For example, as  
10 shown in FIG. 19a, interactive information display screen 364 may include an overlay 366 for purchasing a channel. In operation, the program guide may display interactive information display screen 352 when a user selects channel #4 from channel listings display screen  
15 356. Interactive information display screen 352 may include a detailed description of channel #4 and four user-selectable options including purchase channel #4 option 354. When the user selects purchase channel #4 option 354, the program guide may display interactive  
20 information display screen 364 which includes the same detailed description of channel #4 and the same user-selectable options. In addition, interactive information display screen 364 may include overlay 366, which provides further options for purchasing channel  
25 #4. For example, overlay 366 may present the user with an opportunity to view instructions for purchasing channel #4 via telephone. While overlay 366 is displayed, the user-selectable options (parental lock control, preference profile, purchase channel #4, other  
30 user-selectable options) may be disabled. An overlay such as overlay 366 may also provide other options when other features (e.g., preference profile, parental lock, reminder, etc.) are selected.

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Illustrative steps involved in providing an interactive information display screen having an overlay such as interactive information display screen 364 of FIG. 19a are shown in FIG. 19b. After a user  
5 selects an item, the program guide may display an interactive information display screen at step 292. The step of displaying an interactive information display screen, step 292, may include the step of displaying user-selectable options such as a purchase  
10 option, a preference profile option, a record option, etc. At step 357, after the user has selected an option, the program guide may display an overlay providing further options for exercising the selected option. The overlay may be displayed when appropriate.  
15 For example, when a user selects a tune-to-channel option, displaying an overlay would be inappropriate because there are typically no further options that are available for exercising the tune-to-channel option.

As mentioned above, an interactive  
20 information display screen may allow the user to use scrolling to access user-selectable options that are available but not yet displayed because of display size limitations. For example, as shown in FIG. 20a, interactive information display screen 368 may include  
25 an arrow 371 that indicates that the user may scroll (horizontally, for example) to more user-selectable options. A highlight region may initially be positioned on preference profile option 370. By pressing a remote control right arrow key (or other  
30 suitable directional navigation key) five times, a user may access, display, and position the highlight region on view option 382, which was available, but had not yet been displayed. Scrolling to view option 382 may

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cause other options to be pushed off the display screen. Arrow 373 may indicate that options that were pushed off the screen are still accessible through scrolling. If desired, the user-selectable options may  
5 be made into a continuous loop.

Illustrative steps involved in providing an interactive information display screen having scrollable user-selectable options such as interactive information display screen 368 of FIG. 20a are shown in  
10 FIG. 20b. After a user selects an item, the program guide may display an interactive information display screen at step 292. The step of displaying an interactive information display screen, step 292, may include the step of displaying user-selectable options  
15 such as a purchase option, a preference profile option, a record option, etc. The program guide may determine whether there is sufficient display space to display certain user-selectable options. At step 381, after the program guide determines that there is insufficient  
20 space, the program guide may provide the user with the opportunity to navigate to options that are available but not yet displayed (e.g., by providing an arrow indicator and allowing the user to scroll to options that are not yet displayed).

25 An interactive information display screen may include a program listings option. For example, as shown in FIG. 21a, interactive information display screen 384 may include a program listings option 386 along with six other options (parental lock option 390, profile option 392, view option 384, add-to-favorites  
30 option 396, package option 398, and purchase option 400). In operation, the program guide may display interactive information display screen 384 when a user

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selects channel 11 from channel listings display screen 388. Interactive information display screen 384 may include a detailed description of the selected channel, channel 11, and user-selectable options 384, 386, 390, 5 392, 394, 396, 398, and 400. When a user selects program listings option 386, display screen 402 may be displayed which includes a listing of programs on channel 11.

Illustrative steps involved in providing an  
10 interactive information display screen having a program listings option such as interactive information display screen 368 of FIG. 21a are shown in FIG. 21b. At step 292, after a user has selected an item, the program guide may display an interactive information display  
15 screen. The step of displaying the illustrative interactive information display screen, step 292, may include the step of displaying a program listings option (step 492). After a user selects a program listings option, the program guide may display program  
20 listings for a selected item (step 512). The program listings option may be displayed when the program guide determines that the selected item is a channel, network, or program grouping.

An interactive information display screen may  
25 include an exit option. For example, as shown in FIG. 22a, interactive information display screen 614 may include an exit option 616 and three other options (a related channel option, a parental option, and a profile option). Interactive information display  
30 screen 614 may also include a detailed description for a selected item. Exit option 616 may be selected, for example, by positioning a highlight region on exit option 616 and pressing a remote control key (e.g., an

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OK key). In response, the program guide may return the user to watching television.

Illustrative steps involved in providing an interactive information display screen having an exit option such as interactive information display screen 614 of FIG. 22a are shown in FIG. 22b. At step 292, an interactive information display screen may be displayed. The step of displaying an interactive information display screen, step 292, may include the step of providing an exit option (step 622). When a user has selected an exit option, the program guide may return the user to watching television at step 624. The exit option need not be displayed to be accessible by the user. For example, a predetermined remote control key may be used to select the exit option.

An interactive information display screen may include a last option. For example, as shown in FIG. 22a, interactive information display screen 618 may include a last option 620 and four other options (a current program option, an upcoming program option, a related network option, and an exit option). Last option 620 may be selected, for example, by positioning a highlight region on last option 620 and pressing a remote control key (e.g., an OK key). After last option 620 is selected the program guide returns the user to the previous program guide display screen.

Illustrative steps involved in providing an interactive information display screen having a last option such as interactive information display screen 618 of FIG. 22a are shown in FIG. 22b. At step 292, an interactive information display screen may be displayed. The step of displaying an interactive information display screen, step 292, may include the

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step of providing a last option (step 626). The program guide may determine whether the last option is available before displaying the option (e.g., determine whether the last displayed screen was a program guide display screen). After a user has selected a last option, the program guide may return the user to the previous program guide display screen at step 628. If desired, the last option may always be available to return the user to the previous screen (e.g., return to watching television, return to the previous program guide display screen if any, etc.). The last option need not be displayed to be accessible by the user. For example, a predetermined remote control key may be used to select the last option.

As mentioned above, an interactive information display screen may allow the user to scrolling to access detailed description information that is available but not yet displayed because of display-size limitations. For example, as shown in FIG. 23a, interactive information display screen 630 may include an arrow 632 that indicates that the user may scroll (vertically, for example) to more information. By pressing a remote control arrow key (or other suitable directional navigation key), a user may access more information on a selected item. Scrolling to view more information may cause some of the displayed information to be pushed off the display screen. Arrow 634 may indicate that the information that was pushed off the screen is still accessible through scrolling. When information includes a status indicator (e.g., see FIG. 18a), the status indicator may scroll with the information or may be positioned at a fixed location on the display screen.



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Illustrative steps involved in providing an interactive information display screen having scrollable detailed description information such as interactive information display screen 630 of FIG. 23a are shown in FIG. 23b. After a user selects an item, the program guide may display an interactive information display screen at step 292. The step of displaying an interactive information display screen, step 292, may include the step of displaying a detailed description for the selected item. The program guide may determine whether sufficient display space is available to display certain detailed description information. At step 636, after the program guide determines that there is insufficient space, the program guide may provide the user with the opportunity to navigate to detailed description information that is available but not yet displayed (e.g., by providing an arrow indicator and allowing the user to scroll through the description).

An interactive information display screen may include a favorite channel option. For example, as shown in FIG. 24a, interactive information display screen 522 may include a favorite channel option 524 and six other options (a parental lock option 528, a view option 530, a profile option 532, a program listing option 534, a service package option 536, and a purchase option 538). In operation, the program guide may display interactive information display screen 522 when a user selects channel 4 from program listings display screen 526. Interactive information display screen 522 may include a detailed description of channel 4 and user-selectable options 524, 528, 530, 532, 534, 536, and 538. When a user selects favorite

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channel option 524, the program guide may add the selected channel to a list of favorite channels and may display interactive information display screen 540. Interactive information display screen 540 may include  
5 the same detailed description of the selected channel and may include user-selectable options such as a reminder option, a profile option, a purchase option, etc. The detailed description may include status indicator 529, which indicates that channel 4 is a  
10 favorite channel. The user-selectable options of interactive information display screen 540 may include a remove from favorites option 542.

Illustrative steps involved in providing an interactive information display screen having a  
15 favorites option such as interactive information display screen 522 of FIG. 24a are shown in FIG. 24b. At step 292, after a user has selected an item, the program guide may display an interactive information display screen. The step of displaying an interactive  
20 information display screen, step 292, may involve the step of displaying a favorites option (step 494). A favorites option may be available when the program guide determines that the selected item is a channel or a network that has been selected to access an  
25 interactive information display screen. After a user has selected a favorite channel option from an interactive information display screen, the program guide may add (or remove) the channel from a list of favorite channels at step 514.

30 An interactive information display screen for a network listing may include a local channel option. For example, as shown in FIG. 25a, interactive information display screen 444 may include a local

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channel option 426 along with three other options (a parental lock option 450, a preference profile option 452, and a purchase option 454). In operation, the program guide may display interactive information display screen 444 when a user selects network F from program listings display screen 448. Interactive information display screen 444 may include a detailed description of network F and user-selectable options 446, 450, 452, and 454. Local channel option 446 may include a display region for identifying a local channel that is affiliated with selected network F. When a user selects local channel option 446, the program guide may display interactive information display screen 456. Interactive information display screen 456 may include a detailed description of channel X and user-selectable options.

Illustrative steps involved in providing an interactive information display screen having a local channel option such as interactive information display screen 444 of FIG. 25a are shown in FIG. 25b. After a user has selected an item, the program guide may display an interactive information display screen at step 292. The step of displaying an interactive information display screen, step 292, may involve the step of displaying a local channel option (step 498). A local channel option may be available when the program guide determines that the selected item is a network. After a user has selected a local channel option, the program guide may display an interactive information display screen for the local channel affiliated with the selected network at step 518.

An interactive information display screen may include a program grouping component option. A program

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grouping may be a package, a program series, a mini-series, a sports series, etc. For example, as shown in FIG. 26a, interactive information display screen 460 may include a package component option 462 and four  
5 other options (a preference profile option 466, a parental lock option 468, and a purchase option 470). In operation, the program may display interactive information display screen 460 when a user selects a package for information. Interactive information  
10 display screen 460 may include a detailed description of the selected package, package 2, and user-selectable options 462, 466, 468, 470, and 472. Package component option 462 may include a display region for providing text such as "Package Program A" as an identification  
15 of a program, program A, which is a component of package 2. When a user selects package component option 462, the program guide may display interactive information display screen 474 which may include a detailed description of program A and user-selectable  
20 options such as a reminder option, a record option, a profile option, a package option, etc.

As shown in FIG. 26b, interactive information display screen 463 may include a program grouping component option 465 along with four other options. In  
25 operation, the program may display interactive information display screen 463 when a user selects a program grouping for more information. Interactive information display screen 463 may list the components of the selected program grouping, program grouping 3,  
30 and user-selectable options. Program grouping component option 465 may include a display region for providing text such as "Information on Program Grouping Component A." When a user selects program grouping

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component option 465, the program guide may display interactive information display screen 467 for component A of program grouping 3. If desired, interactive information display screen 463 may include  
5 a scrollable list of program grouping components, which may be selectable to access an interactive information display screen for a listed program grouping component, and may include user-selectable options such as purchase, parental, etc. for the selected program  
10 grouping (e.g., see, FIG. 26d).

Illustrative steps involved in providing an interactive information display screen having a program grouping component option such as interactive information display screen 460 of FIG. 26a or  
15 interactive information display screen 463 of FIG. 26b are shown in FIG. 26c. After a user has selected an item, the program guide may display an interactive information display screen at step 292. The step of displaying an interactive information display screen,  
20 step 292, may involve the step of displaying a program grouping component option (step 500). A program grouping component option may be available when the program guide determines that the selected item is a program grouping (e.g., a mini-series, a sports series,  
25 a package, etc.). At step 520, after a user has selected a program grouping component option, the program guide may display an interactive information display screen for a package component (e.g., a program which is part of the package). If desired, step 520  
30 may involve displaying a list of components to provide the user with the opportunity to select a component from the list to access an interactive information display screen for the selected component.

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Illustrative steps involved in providing an interactive information display screen having a graphic image such as interactive information display screen 702 of FIG. 15a are shown in FIG. 27. At step 292, the  
5 program guide may display an interactive information display screen. At step 638, the program guide may display one or more graphic images. A graphic image may be related to the selected item. The graphic image may be selectable to access information associated with  
10 the image.

Illustrative steps involved in providing an interactive information display screen having a video display such as interactive information display screen 550 of FIG. 16a. are shown in FIG. 27. At step 292,  
15 the program guide may display an interactive information display screen. At step 640, the program guide may display a video. The video may be a video clip, broadcast video, etc. A video clip may be related to a selected item (e.g., the video clip may be  
20 a video preview for a program). A video clip may be selectable to access information associated with the video clip. A desired video clip may be provided using a server located at the television distribution facility. Systems in which video clips are provided  
25 are described, for example, in U.S. Patent No. 5,523,796, which is hereby incorporated by reference herein in its entirety. Broadcast video may be related to a selected item (e.g., when the selected item is a currently airing program, a network, or a channel, a  
30 reduced image video of the program, channel, or network may be displayed). Broadcast video may be unrelated to a selected item (e.g., display reduced image broadcast

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video from the channel the user was viewing before coming into the guide).

Illustrative steps involved in providing an interactive information display screen having an advertisement such as interactive information display screen 120 of FIG. 6a or interactive information display screen 138 of FIG. 7a are shown in FIG. 27. At step 292, the program guide may display an interactive information display screen that may include an advertisement. At step 642, the program guide may display an advertisement that may be related (or unrelated) to the selected item. For example, to display an unrelated advertisement, the program guide may display an advertisement from a predetermined advertisement rotation. A related advertisement may include an advertisement that simply has one attribute in common with the selected item. The advertisement may be selectable to access more information related to the advertisements. For example, an advertisement may be selected to display an option to purchase related merchandise. An option to purchase related merchandise may involve transmitting an order to an order fulfillment house (either directly from the user or via the television distribution facility). A system in which products may be ordered from a program guide is described in Knudson et al. U.S. patent application Serial No. 09/034,939, filed March 4, 1998, which is hereby incorporated by reference herein in its entirety. Program guide systems with product ordering are also described in Ellis et al. U.S. patent application Serial No. 08/428,809, filed April 24, 1995, which is hereby incorporated herein by reference in its entirety.

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An interactive information display screen may include Internet-related options such as an e-mail option. For example, as shown in FIG. 28a, interactive information display screen 644 may include e-mail  
5 option 646 and two other user-selectable options. When a user selects e-mail option 646, the program guide may display interactive information display screen 648. Interactive information display screen 648 may include a display 650 for preparing and sending an e-mail to an  
10 address related to the selected item. The address may be automatically inserted into the display 650. If desired, when the e-mail option has been selected, the program guide may display interactive information display screen 652, which may include a display 654 for  
15 sending a recording of the selected item, an image, a video clip, merchandise, or program guide data to an e-mail address which is provided by the user. The program guide may also display interactive information display screen 656 which may include display 658.  
20 Display 658 may include options for sending an e-mail having information related to the selected item such as text, a recording of the selected item, an authorization to view the selected item, an image related to the selected item, a video clip related to  
25 the selected item, merchandise related to the selected item, program guide data for the selected item, etc.

Illustrative steps involved in providing an interactive information display screen having an e-mail option such as interactive information display screen  
30 644 of FIG. 28a are shown in FIG. 28b. After a user has selected an item, the program guide may display an interactive information display screen. Displaying an interactive information display screen, step 292, may



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involve displaying an e-mail option (step 660).  
Displaying an e-mail option may involve the step of  
determining whether an e-mail option is available  
(e.g., determining whether a selected program has a  
5 related e-mail address). An e-mail option may be  
available when the selected item is a program, a  
program listing, a channel, a network, or a program  
grouping. At step 662, after a user has selected an  
e-mail option, the program guide may provide the user  
10 with an opportunity to send an e-mail. Step 662 may  
involve displaying options for sending an e-mail that  
includes information which may be related to the  
selected item such as text, a recording, viewing  
authorization, an image, a video clip, merchandise,  
15 program guide data, etc. Step 662 may involve the step  
of launching an e-mail application for preparing and  
sending an e-mail (e.g., displaying a draft e-mail  
having an e-mail address related to the selected item).  
E-mail related data may have been provided to the  
20 program guide as part of the program listings data  
supplied to the user television equipment. Program  
guide features related to e-mail are described in  
McKissick et al. U.S. patent application Serial No.  
09/356,245 filed concurrently herewith, which is  
25 incorporated herein by reference in its entirety, and  
in above-mentioned 09/346,134. The e-mail option may  
be used to provide feedback on a particular program.

An interactive information display screen may  
include a data service option or an application option.  
30 For example, as shown in FIG. 29a, interactive  
information display screen 664 may include data service  
option 666, application option 668 and other

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appropriate user-selectable options. When a user selecting data service option 666, the program guide may display interactive information display screen 670 that may include partial or full screen display 672 for displaying data from a data service related to the selected item. When a user selects application option 668, the program guide may display interactive information display screen 674 that may include a partial or full screen display 676 for displaying an application that is related to the selected item.

Illustrative steps involved in providing interactive information display screen having a data service option such as interactive information display screen 664 of FIG. 29a are shown in FIG. 29b. After a user has selected an item for information, the program guide may display an interactive information display screen at step 292. Displaying an interactive information display screen may involve displaying a data service option (step 678). Displaying a data service option may involve determining whether a data service that is related to the selected item is available. After a user has selected a data service option, the program guide may display data related to the selected item (e.g., a real-time stock ticker) at step 692. Data service applications are described in Knudson et al. U.S. patent application Serial No. 09/229,047, filed January 12, 1999, which is hereby incorporated by reference herein in its entirety.

Illustrative steps involved in providing an interactive information display screen having an application option such as interactive information display screen 664 of FIG. 29a are shown in FIG. 29b. At step 292, displaying an interactive information

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display screen may involve the step of displaying an application option (step 680). Displaying an application option may involve determining whether an application that is related to the selected item is  
5 available. After a user has selected an application option, the program guide may launch an application that is related to the selected item and may display the running application (e.g., display a video game) at step 682. The data service option and the application  
10 option are discussed together for conciseness. These options may be displayed in an interactive information display screen together or separately. Program guide systems with non-program guide application capabilities are described in above mentioned 09/346,134.

15 An interactive information display screen may include a video option. For example, as shown in FIG. 30a, interactive information display screen 802 may include a video option 804, other user-selectable options, and a detailed description of a selected item.  
20 Interactive information display screen 802 may be displayed when a user selects program 4 for more information from program guide display screen 800. When a user selects video option 804, the program guide may display a video in partial or full screen display  
25 806 in interactive information display 802. The video may be a video related to the selected item (program 5) or may be a portion of the selected item. If desired, when video option 804 is selected, the program guide may download a video clip which is related to the  
30 selected item (program 5). The download may occur in background processing.

Illustrative steps involved in providing an interactive information display screen having a video

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option such as interactive information display screen 802 of FIG. 309 are shown in FIG. 30b. After a user has selected an item for information, the program guide may display an interactive information display screen at step 292. Displaying an interactive information display screen may involve displaying a video option (step 808). Displaying a video option may involve step 808a for determining whether a video option is available. A video option may be available when the selected item is a program (or program listing), channel, network, or program grouping. After a user has selected a video option, the program guide may provide a video clip (e.g., display a video clip related to the item, display a portion of the selected item, download a video clip related to the selected item, etc.) at step 810.

Options such as the options discussed above may be displayed in any appropriate combination in an interactive information display screen for a selected item. For brevity, the appropriateness for the display of each option is discussed with the option.

A remote control may shortcut keys. For example, a remote control may have a record key, a lock key, a favorite key, etc. If desired, pressing one of these shortcut keys while tuned to a program, or while highlighting a program listing, a channel, a network, or a program grouping may cause an information display screen related to the program, program listing, channel, network, or program grouping to be displayed, and may further cause an option related to the shortcut key to be automatically selected (e.g., automatically selects a record option, a lock option, a favorite option, etc.). If desired, when an interactive

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information display screen is displayed, pressing a shortcut key may cause an available option to be selected (e.g., a record option, a parental option, a favorite option, etc. is selected) without requiring  
5 further actions by the user to select the option (e.g., without the user having to highlight the available option and press a data entry key for the option to select the option).

Although the principles of the invention have  
10 been described primarily in the context of program guides and programming related items, the invention is not so limited. If desired, the items may be non-programming-related items and the interactive application that displays these items may be a non-  
15 program-guide application. For example, the interactive application may be a home shopping application and the items may be product listings, when the user selects a desired item, additional information is displayed on that item in an interactive home  
20 shopping information display screen. This screen includes selectable options related to various home shopping features such as web-related features, home shopping chat features, or the like.

The foregoing is merely illustrative of the  
25 principles of this invention and various modifications can be made by those skilled in the art without departing from the scope and spirit of the invention.

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What is claimed is:

1. A method for using an interactive television program guide having a number of program guide features, wherein a user may view a number of programming-related items, and wherein there is information on each programming-related item that is associated with that programming-related item, comprising:

displaying at least one of the programming-related items for the user;

allowing the user to select that programming-related item to access the associated information;

determining which of the program guide features are to be available to be exercised in connection with the selected programming-related item; and

displaying an interactive information display screen that includes selectable program guide options for exercising the available program guide features in connection with the selected programming-related item and that includes the associated information for that selected item.

2. The method defined in claim 1 wherein the programming-related item is a television program, the method further comprising:

displaying the television program for the user; and

allowing the user to select the television program to access the information associated with the television program.

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3. The method defined in claim 1 wherein the programming-related item is a program listing, the method further comprising:

displaying the program listing for the user; and

allowing the user to select the program listing to access the information associated with the program listing.

4. The method defined in claim 1 wherein the programming-related item is a program listing, the method further comprising:

simultaneously displaying a plurality of the program listings for the user; and

allowing the user to select one of the program listings to access the information associated with that program listing.

5. The method defined in claim 1 wherein determining includes determining the number of available program guide features based on the information associated with the selected programming-related item.

6. The method defined in claim 1 wherein displaying an interactive information display screen includes determining names for the options based on the information associated with the selected programming-related item.

7. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying plural suboptions which are related to the selected program guide option.

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8. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an overlay in the interactive information display screen that includes plural suboptions for exercising a selected program guide option.

9. The method defined in claim 1 wherein displaying an interactive information display screen includes scrolling through the options when at least one of the options is available but not yet displayed due to display-size limitations.

10. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an advertisement in the interactive information display screen.

11. The method defined in claim 10 wherein displaying an advertisement includes providing the user with the opportunity to select the advertisement.

12. The method defined in claim 1 wherein displaying an interactive information display screen includes scrolling to associated information for the selected programming-related item which is available but not yet displayed.

13. The method defined in claim 1 wherein the displaying an interactive information display screen includes displaying in the interactive information display screen a video clip that is related to the selected programming-related item.



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14. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen an image which is related to the selected programming-related item.

15. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a status for the selected programming-related item.

16. The method defined in claim 15 wherein the status indicates whether a reminder has been set for the selected programming-related item.

17. The method defined in claim 15 wherein the status indicates whether a recording has been scheduled for the selected programming-related item.

18. The method defined in claim 15 wherein the status indicates whether the selected programming-related item has been purchased.

19. The method defined in claim 15 wherein the status indicates whether the selected programming-related item is on a list of favorites.

20. The method defined in claim 15 wherein the status indicates whether the selected programming-related item is parental locked.

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21. The method defined in claim 1 wherein allowing includes allowing the user to select a listing.

22. The method defined in claim 1 wherein allowing includes allowing the user to select a program that is being displayed.

23. The method defined in claim 1 wherein allowing includes allowing the user to select an information option from another interactive information display screen.

24. The method defined in claim 1 wherein the selected programming-related item is a television program.

25. The method defined in claim 1 wherein the selected programming-related item is a channel.

26. The method defined in claim 1 wherein the selected programming-related item is a network.

27. The method defined in claim 1 wherein the selected programming-related item is a package.

28. The method defined in claim 1 wherein the selected programming-related item is a program grouping.

29. The method defined in claim 1 wherein displaying an interactive information display screen

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includes providing an exit option for returning to viewing television.

30. The method defined in claim 1 wherein displaying an interactive information display screen includes providing a last option to return to a previous program guide display screen which was accessed by the user.

31. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen an option which is related to a program guide reminder feature.

32. The method defined in claim 1 wherein the selected programming-related item is a program and wherein displaying an interactive information display screen includes displaying in the interactive information display screen a reminder option for setting a reminder for the program.

33. The method defined in claim 1 wherein the programming-related item is a program and wherein displaying an interactive information display screen includes providing a user-selectable reminder option for deleting a reminder for the program.

34. The method defined in claim 1 wherein the programming-related item is a program and wherein displaying an interactive information display screen includes providing a user-selectable reminder option for modifying a reminder for the program.

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35. The method defined in claim 1 wherein the programming-related item is a program grouping and wherein displaying an interactive information display screen includes providing a user-selectable reminder option for setting a series reminder for the program grouping.

36. The method defined in claim 1 wherein the programming-related item is a program grouping and wherein displaying an interactive information display screen includes providing a user-selectable reminder option for modifying a series reminder for the program grouping.

37. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen an option which is related to a program guide parental control feature.

38. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen a parental control option.

39. The method defined in claim 1 wherein displaying an interactive information display screen includes:

displaying in the interactive information display screen a parental control option;  
and

requiring code entry when the parental control option is selected.

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40. The system of claim 39 wherein displaying in the interactive information display screen a parental control option includes selecting parental controls based on attributes of the selected programming-related item.

41. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen an option to allow the user to select parental controls for the selected programming-related item.

42. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen an option to allow the user to remove parental controls for the selected programming-related item.

43. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen an option to allow the user to change parental controls for the selected programming-related item.

44. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen an option to allow the user to set parental controls for the selected programming-related

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item when the selected programming-related item is from group consisting of a program and a channel.

45. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen an option related to purchasing the selected programming-related item.

46. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen a purchase option to allow the user to purchase the selected programming-related item on impulse.

47. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen a purchase option to allow the user to purchase the selected programming-related item by telephone.

48. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen a purchase option to allow the user to purchase the selected programming-related item on demand.

49. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information

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display screen a purchase option when the selected programming-related item is a program.

50. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen a purchase option when the selected programming-related item is a channel.

51. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen a purchase option when the selected programming-related item is a package.

52. The method defined in claim 1 wherein displaying an interactive information display screen includes:

displaying in the interactive information display screen a purchase option; and  
allowing the user to enter a purchase code which is required to complete a purchase.

53. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying in the interactive information display screen a purchase option to allow the user to cancel a purchase request for the selected programming-related item.

54. The method defined in claim 1 wherein displaying an interactive information display screen

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includes displaying in the interactive information display screen an add-to-favorites option.

55. The method defined in claim 1 wherein displaying an interactive information display screen includes for displaying an option in the interactive information display screen that allows the programming-related item that is a channel to be set as a favorite channel.

56. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen that allows the programming-related item which is a channel to be removed as a favorite channel.

57. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen that is related to user preference profiles.

58. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a preference profile option in the interactive information display screen that provides an opportunity to control preference profile settings based on attributes of the selected programming-related item.

59. The method defined in claim 1 wherein displaying an interactive information display screen



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includes displaying a preference profile option in the interactive information display screen that provides an opportunity to set preference profile settings.

60. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a preference profile option in the interactive information display screen that provides an opportunity to remove preference profile settings.

61. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a preference profile option in the interactive information display screen that provides an opportunity to change preference profile settings.

62. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen that is related to user preference profiles when the programming-related item is a program.

63. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen that is related to user preference profiles when the programming-related item is a channel.

64. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive

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information display screen that is related to other showings of the selected programming-related item when the selected programming-related item is a program.

65. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen that is related to a specific other showing of the selected programming-related item when the selected programming-related item is a program.

66. The method defined in claim 1 wherein displaying an interactive information display screen includes:

displaying an option in the interactive information display screen that is related to a specific other showing of the selected programming-related item when the selected programming-related item is a program; and

displaying an interactive information display screen for the specific other showing.

67. The method defined in claim 1 wherein displaying an interactive information display screen includes:

displaying an option in the interactive information display screen that is related to a specific other showing of the selected programming-related item when the selected programming-related item is a program; and

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displaying an information display screen containing a list of other showings as individual options.

68. The method defined in claim 1 wherein displaying an interactive information display screen includes:

displaying an option in the interactive information display screen that is related to other showings of the selected programming-related item when the selected programming-related item is a program;

displaying an information display screen containing a list of the other showings as individual options; and

allowing the user to navigate to other showings which are available but not yet displayed.

69. The method defined in claim 1 wherein displaying an interactive information display screen includes:

displaying an option in the interactive information display screen that is related to other showings of the selected programming-related item when the selected programming-related item is a program; and

displaying an information display screen having a list of the other showings as individual options and having information on a highlighted one of the other showings.

70. The method defined in claim 1 wherein displaying an interactive information display screen includes:

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displaying an option in the interactive information display screen that is related to other showings of the selected programming-related item when the selected programming-related item is a program;

displaying an information display screen having a list of the other showings as individual options; and

displaying an interactive information display screen for the selected one of the other showings.

71. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen that is related to all other program showings having the same title as the selected programming-related item when the selected programming-related item is a program.

72. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen that is related to all other showings for the same selected programming-related item when the selected programming-related item is a program.

73. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen that is related to all other program showings that are part of the selected

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programming-related item when the selected programming-related item is a program grouping.

74. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen which is related to recording the selected programming-related item.

75. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a record option in the interactive information display screen which when selected directs a videocassette recorder to record the selected programming-related item.

76. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a record option in the interactive information display screen which when selected directs a video recording device at a television distribution facility to record the selected programming-related item.

77. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a record option in the interactive information display screen which when selected directs a local digital storage device to record the selected programming-related item.

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78. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a record option in the interactive information display screen for recording the selected programming-related item when the selected programming-related item is a program.

79. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a record option in the interactive information display screen for recording the selected programming-related item when the selected programming-related item is a program grouping.

80. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen for scheduling to record the selected programming-related item.

81. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen for deleting a scheduled recording of the selected programming-related item.

82. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen for modifying a scheduled recording of the selected programming-related item.

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83. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen for recording the selected programming-related item when the selected programming-related item is a currently airing program

84. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen which is related to a program grouping of the selected programming-related item.

85. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping option in the interactive information display screen when the selected programming-related item is part of a program series.

86. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping option in the interactive information display screen when the selected programming-related item is part of a mini-series.

87. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping option in the interactive information display screen when the

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selected programming-related item is part of a sports series.

88. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping option in the interactive information display screen when the selected programming-related item is part of a package.

89. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping option in the interactive information display screen for accessing an interactive information display screen for a program grouping which is related to the selected programming-related item when the selected programming-related item is a program.

90. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping option in the interactive information display screen for accessing an interactive information display screen for a program grouping which is related to the selected programming-related item when the selected programming-related item is a channel.

91. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping option in the interactive information display screen for accessing an interactive information display screen for a program



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grouping containing the selected programming-related item.

92. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping option in the interactive information display screen for displaying a list of program groupings which contain the selected programming-related item.

93. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping option in the interactive information display screen for accessing an interactive information display screen for a package containing the selected programming-related item.

94. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping option in the interactive information display screen for displaying a list of packages which contain the selected programming-related item.

95. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping component option in the interactive information display screen for accessing information on a component of the selected programming-related item when the selected programming-related item is a program grouping.

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96. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping component option in the interactive information display screen for displaying an interactive information display screen for a program component of the selected programming-related item when the selected programming-related item is a package.

97. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping component option in the interactive information display screen for displaying an interactive information display screen for a channel component of the selected programming-related item when the selected programming-related item is a package.

98. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping component option in the interactive information display screen for displaying an interactive information display screen for a program component of the selected programming-related item when the selected programming-related item is a program series.

99. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping component option in the interactive information display screen for displaying an interactive information display screen for a program component of the selected programming-

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related item when the selected programming-related item is a mini-series.

100. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program grouping component option in the interactive information display screen for displaying an interactive information display screen for a program component of the selected programming-related item when the selected programming-related item is a sports series.

101. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an e-mail option in the interactive information display screen.

102. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an e-mail option in the interactive information display screen for sending e-mail to an address which is related to the selected programming-related item.

103. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an e-mail option in the interactive information display screen for sending a recorded copy of at least part of the selected programming-related item.

104. The method defined in claim 1 wherein displaying an interactive information display screen

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includes displaying an e-mail option in the interactive information display screen for sending an authorization to view the selected programming-related item.

105. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an e-mail option in the interactive information display screen for sending an image from the selected programming-related item.

106. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an e-mail option in the interactive information display screen for sending a video clip which is related to the selected programming-related item.

107. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an e-mail option in the interactive information display screen for sending a merchandise related to the selected programming-related item.

108. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an e-mail option in the interactive information display screen for sending program guide information related to the selected programming-related item.

109. The method defined in claim 1 wherein displaying an interactive information display screen

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includes displaying a feedback option in the interactive information display screen.

110. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a data service option in the interactive information display screen for accessing a data service which is related to the selected programming-related item.

111. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an option in the interactive information display screen for selecting to run an application which is related to the selected programming-related item.

112. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a chat option in the interactive information display screen.

113. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a chat option in the interactive information display screen for joining a chat session related to the selected programming-related item.

114. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a chat option in the interactive information display screen for initiating a chat

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session related to the selected programming-related item.

115. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a chat option in the interactive information display screen for scheduling a reminder for a chat session related to the selected programming-related item.

116. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an Internet option in the interactive information display screen for accessing a web page related to the selected programming-related item.

117. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an Internet option in the interactive information display screen for displaying a list of web pages which are related to the selected programming-related item.

118. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a video option in the interactive information display screen for displaying a video clip.

119. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a video option in the interactive information display screen for displaying a video clip

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which is related to the selected programming-related item.

120. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a video option in the interactive information display screen for downloading to local storage a video clip which is related to the selected programming-related item.

121. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a video option in the interactive information display screen for displaying a portion of the selected programming-related item.

122. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a related channel option in the interactive information display screen for displaying an interactive information display screen for a channel which is showing the selected programming-related item when the selected programming-related item is a program.

123. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a related network option in the interactive information display screen for displaying an interactive information display screen for a network which is showing the selected programming-related item when the selected programming-related item is a program.

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124. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a current program option in the interactive information display screen for displaying an interactive information display screen for a current program which is being shown on the selected programming-related item when the selected programming-related item is a channel.

125. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a current program option in the interactive information display screen for displaying an interactive information display screen for a current program which is being shown on the selected programming-related item when the selected programming-related item is a network.

126. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an upcoming program option in the interactive information display screen for displaying an interactive information display screen for a program which is to be shown on the selected programming-related item when the selected programming-related item is a channel.

127. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying an upcoming program option in the interactive information display screen for displaying an interactive information display screen for a program which is to be shown on the selected programming-



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related item when the selected programming-related item is a network.

128. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a local channel option in the interactive information display screen for displaying an interactive information display screen for a channel which is a local affiliate of the selected programming-related item when the selected programming-related item is a network.

129. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program listings option in the interactive information display screen for displaying a list of programs scheduled to be shown on the selected programming-related item when the selected programming-related item is a channel.

130. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a program listings option in the interactive information display screen for displaying a list of programs scheduled to be shown on the selected programming-related item when the selected programming-related item is a network.

131. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a tune-to-channel option in the interactive information display screen when the selected programming-related item is a channel.

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132. The method defined in claim 131 wherein displaying a tune-to-channel option includes renaming the tune-to-channel option when the selected programming-related item is a music channel.

133. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a view option in the interactive information display screen for viewing the selected programming-related item when the selected programming-related item is a program.

134. The method defined in claim 1 wherein displaying an interactive information display screen includes displaying a tune-to-channel option in the interactive information display screen for tuning to a channel which will show the selected programming-related item when the selected programming-related item is an upcoming program.

135. A method for providing interactive information display screens in a television system, comprising:

providing a user with an opportunity to select one of multiple programming-related items to access associated information on the item; and

displaying an interactive information display screen that includes the information associated with a selected item and that includes user-selectable hyperlinks to other information display screens having information about programming-related items that are different from but related to the selected item.

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136. The method defined in claim 135 further comprising:

- providing various features;
- determining which features are available to be exercised in connection with the selected programming-related item; and
- providing the determined features for the selected programming-related item in the information display screen.

137. The method defined in claim 135 further comprising providing a reminder option which is selectable from the interactive information display screen for exercising a program guide reminder feature in connection with the selected programming-related item.

138. The method defined in claim 135 further comprising providing a view option which is selectable from the interactive information display screen for exercise in connection with the selected programming-related item.

139. The method defined in claim 135 further comprising providing a listen option which is selectable from the interactive information display screen for exercising a listen feature in connection with the selected programming-related item.

140. The method defined in claim 135 further comprising providing a tune-to-channel option which is selectable from the interactive information display

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screen for exercising a tune-to-channel feature in connection with the selected programming-related item.

141. The method defined in claim 135 further comprising providing a parental control option which is selectable from the interactive information display screen for exercising a parental control feature in connection with the selected programming-related item.

142. The method defined in claim 135 further comprising providing a purchase option which is selectable from the interactive information display screen for exercising a purchase feature in connection with the selected programming-related item.

143. The method defined in claim 135 further comprising providing an other channel/time option which is selectable from the interactive information display screen for exercising a program guide other channel/time feature in connection with the selected programming-related item.

144. The method defined in claim 135 further comprising providing an a preference profile option which is selectable from the interactive information display screen for exercising a preference profile feature in connection with the selected programming-related item.

145. The method defined in claim 135 further comprising providing a record option which is selectable from the interactive information display

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screen for exercising a record feature in connection with the selected programming-related item.

146. The method defined in claim 135 further comprising providing a package hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for a package which includes the selected programming-related item.

147. The method defined in claim 135 further comprising providing a network hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for a network which is related to the selected programming-related item.

148. The method defined in claim 135 further comprising providing a channel hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for a channel which is related to the selected programming-related item.

149. The method defined in claim 135 further comprising:

determining whether the selected programming-related item is a channel; and

providing a current program hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for a current program on the channel.

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150. The method defined in claim 135 further comprising:

determining whether the selected programming-related item is a channel; and

providing an upcoming program hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for an upcoming program on the channel.

151. The method defined in claim 135 further comprising providing a web page option which is selectable from the interactive information display screen for displaying a web page which is related to the selected programming-related item.

152. The method defined in claim 135 further comprising providing a chat session option which is selectable from the interactive information display screen for displaying a chat session which is related to the selected programming-related item.

153. The method defined in claim 135 further comprising providing an e-mail option which is selectable from the interactive information display screen for drafting an e-mail message to an address related to the selected programming-related item.

154. The method defined in claim 135 further comprising displaying a status indicator within the interactive information display screen for providing status information on the selected programming-related item.

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155. The method defined in claim 135 further comprising:

- providing options for the selected programming-related item; and
- displaying the option within the interactive information display screen.

156. The method defined in claim 135 further comprising:

- providing options for the selected programming-related item;
- displaying some of the options; and
- scrolling to display the other options.

157. The method defined in claim 135 further comprising providing a program listings option which is selectable from the interactive information display screen for exercising a program guide program listing feature in connection with the selected programming-related item.

158. The method defined in claim 135 further comprising providing an exit option which is selectable from the interactive information display screen for exiting the interactive information display screen.

159. The method defined in claim 135 further comprising providing a last option which is selectable from the interactive information display screen for returning to a previous screen which was accessed by the user.

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160. The method defined in claim 135 further comprising scrolling the information about the selected programming-related item.

161. The method defined in claim 135 further comprising providing an add-to-favorites option which is selectable from the interactive information display screen for exercising a favorites feature in connection with the selected programming-related item.

162. The method defined in claim 135 further comprising providing a program hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for a program which is related to the selected programming-related item.

163. The method defined in claim 135 wherein the information display screen includes a graphic image.

164. The method defined in claim 135 wherein the information display screen includes a graphic image which is related to the selected programming-related item.

165. The method defined in claim 135 wherein the information display screen includes a graphic image which is selectable to access an information display screen for the graphic image.

166. The method defined in claim 135 wherein the information display screen includes video.



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167. The method defined in claim 135 wherein the information display screen includes broadcast video related to the selected programming-related item.

168. The method defined in claim 135 wherein the information display screen includes broadcast video related to video that a user was previously viewing.

169. The method defined in claim 135 wherein the information display screen includes a video clip.

170. The method defined in claim 135 wherein the information display screen includes a video clip which is related to the selected programming-related item.

171. The method defined in claim 135 wherein the information display screen includes a video clip to provide a preview for the selected programming-related item.

172. The method defined in claim 135 wherein the information display screen includes a video clip which is selectable to access an interactive information display screen for the video clip.

173. The method defined in claim 135 wherein the information display screen includes an advertisement.

174. The method defined in claim 135 wherein the information display screen includes an

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advertisement which is related to the selected programming-related item.

175. The method defined in claim 135 wherein the information display screen includes an advertisement which is selectable to access an interactive information display screen for the advertisement.

176. A method for using an interactive television program guide system, comprising:  
displaying an information display screen containing a description of a television channel; and  
displaying a tune to channel option in the information display screen for viewing a program airing on the channel.

177. A method for using an interactive television program guide system, comprising:  
displaying an information display screen having a description of a television channel; and  
displaying a parental control option in the information display screen.

178. A method for using an interactive television program guide system, comprising:  
displaying an information display screen having a description of a television channel; and  
displaying a purchase option in the information display screen.

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179. A method for using an interactive television program guide system, comprising:

- displaying an information display screen having a description of a television network; and
- displaying a program listings option in the information display screen for providing a program listing for the network.

180. A method for using an interactive television program guide system, comprising:

- displaying an information display screen having a description of a television channel; and
- displaying a favorites option in the information display screen for adding the channel to a list of favorites.

181. A method for using an interactive television program guide system, comprising:

- displaying an information display screen having a description of a television network; and
- displaying a program grouping option in the information display screen for providing detailed information on a package that includes the network as a component.

182. A method for using an interactive television program guide system, comprising:

- displaying an information display screen having a description of a television network; and
- displaying a local channel option in the information display screen for providing detailed information on a local network affiliate of the network.

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183. A method for using an interactive television program guide system, comprising:

displaying an information display screen on the user television equipment having a description of a television program grouping; and

displaying a program grouping component option in the information display screen for providing detailed information on a component of the program grouping.

184. An interactive television program guide system having a number of program guide features, wherein a user may view a number of programming-related items, and wherein there is information on each programming-related item that is associated with that programming-related item, comprising:

user television equipment on which an interactive television program guide is at least partially implemented, wherein the user television equipment is configured to display at least one of the programming-related items for the user, is configured to allow the user to select that programming-related item to access the associated information, is configured to determine which of the program guide features are to be available to be exercised in connection with the selected programming-related item, and is further configured to display an interactive information display screen that includes selectable program guide options for exercising the available program guide features in connection with the selected programming-related item and that includes the associated information for that selected item.

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185. The system defined in claim 184 wherein the programming-related item is a television program, the user television equipment is further configured to display the television program for the user and to allow the user to select the television program to access the information associated with the television program.

186. The system defined in claim 184 wherein the programming-related item is a program listing, the user television equipment is further configured to display the program listing for the user, and to allow the user to select the program listing to access the information associated with the program listing.

187. The system defined in claim 184 wherein the programming-related item is a program listing, the user television equipment is further configured to simultaneously display a plurality of the program listings for the user, and to allow the user to select one of the program listings to access the information associated with that program listing.

188. The system defined in claim 184 wherein the user television equipment is configured to determine the number of available program guide features based on the information associated with the selected programming-related item.

189. The system defined in claim 184 wherein the user television equipment is configured to determine names for the options based on the

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information associated with the selected programming-related item.

190. The system defined in claim 184 wherein the user television equipment is configured to display plural suboptions which are related to the selected program guide option.

191. The system defined in claim 184 wherein the user television equipment is configured to display an overlay in the interactive information display screen that includes plural suboptions for exercising a selected program guide option.

192. The system defined in claim 184 wherein the user television equipment is configured to scroll through the options when at least one of the options is available but not yet displayed due to display-size limitations.

193. The system defined in claim 184 wherein the user television equipment is configured to display an advertisement in the interactive information display screen.

194. The system defined in claim 193 wherein the user television equipment is configured to provide the user with the opportunity to select the advertisement.

195. The system defined in claim 184 wherein the user television equipment is configured to scroll to associated information for the selected programming-

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related item which is available but not yet displayed.

196. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a video clip that is related to the selected programming-related item.

197. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen an image which is related to the selected programming-related item.

198. The system defined in claim 184 wherein the user television equipment is configured to display a status for the selected programming-related item.

199. The system defined in claim 198 wherein the status indicates whether a reminder has been set for the selected programming-related item.

200. The system defined in claim 198 wherein the status indicates whether a recording has been scheduled for the selected programming-related item.

201. The system defined in claim 198 wherein the status indicates whether the selected programming-related item has been purchased.

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202. The system defined in claim 198 wherein the status indicates whether the selected programming-related item is on a list of favorites.

203. The system defined in claim 198 wherein the status indicates whether the selected programming-related item is parental locked.

204. The system defined in claim 184 wherein the user television equipment is configured allow the user to select a listing.

205. The system defined in claim 184 wherein the user television equipment is configured to allow the user to select a program that is being displayed.

206. The system defined in claim 184 wherein the user television equipment is configured to allow the user to select an information option from another interactive information display screen.

207. The system defined in claim 184 wherein the selected programming-related item is a television program.

208. The system defined in claim 184 wherein the selected programming-related item is a channel.

209. The system defined in claim 184 wherein the selected programming-related item is a network.

210. The system defined in claim 184 wherein the selected programming-related item is a package.



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211. The system defined in claim 184 wherein the selected programming-related item is a program grouping.

212. The system defined in claim 184 wherein the user television equipment is configured to provide an exit option for returning to viewing television.

213. The system defined in claim 184 wherein the user television equipment is configured to provide a last option for returning to a previous program guide display screen which was accessed by the user.

214. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen an option which is related to a program guide reminder feature.

215. The system defined in claim 184 wherein the selected programming-related item is a program and the user television equipment is configured to display in the interactive information display screen a reminder option for setting a reminder for the program.

216. The system defined in claim 184 wherein the programming-related item is a program and wherein the user television equipment is configured to provide a user-selectable reminder option for deleting a reminder for the program.

217. The system defined in claim 184 wherein the programming-related item is a program and wherein the user television equipment is configured to provide

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a user-selectable reminder option for modifying a reminder for the program.

218. The system defined in claim 184 wherein the programming-related item is a program grouping and wherein the user television equipment is configured to provide a user-selectable reminder option for setting a series reminder for the program grouping.

219. The system defined in claim 184 wherein the programming-related item is a program grouping and wherein the user television equipment is configured to provide a user-selectable reminder option for modifying a series reminder for the program grouping.

220. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen an option which is related to a program guide parental control feature.

221. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a parental control option.

222. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a parental control option and configured to require code entry when the parental control option is selected.

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223. The system of claim 222 wherein the user television equipment is configured to display in the interactive information display screen a parental control option includes selecting parental controls based on attributes of the selected programming-related item.

224. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen an option to allow the user to select parental controls for the selected programming-related item.

225. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen an option to allow the user to remove parental controls for the selected programming-related item.

226. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen an option to allow the user to change parental controls for the selected programming-related item.

227. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen an option to allow the user to set parental controls for the selected programming-related item when the selected programming-related item is from a group consisting of a program and a channel.

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228. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen an option related to purchasing the selected programming-related item.

229. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a purchase option to allow the user to purchase the selected programming-related item on impulse.

230. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a purchase option to allow the user to purchase the selected programming-related item by telephone.

231. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a purchase option to allow the user to purchase the selected programming-related item on demand.

232. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a purchase option when the selected programming-related item is a program.

233. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a

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purchase option when the selected programming-related item is a channel.

234. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a purchase option when the selected programming-related item is a package.

235. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a purchase option and is configured to allow the user to enter a purchase code which is required to complete a purchase.

236. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen a purchase option to allow the user to cancel a purchase request for the selected programming-related item.

237. The system defined in claim 184 wherein the user television equipment is configured to display in the interactive information display screen an add-to-favorites option.

238. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that allows the programming-related item that is a channel to be set as a favorite channel.

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239. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that allows the programming-related item which is a channel to be removed as a favorite channel.

240. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to user preference profiles.

241. The system defined in claim 184 wherein the user television equipment is configured to display a preference profile option in the interactive information display screen that provides an opportunity to control preference profile settings based on attributes of the selected programming-related item.

242. The system defined in claim 184 wherein the user television equipment is configured to display a preference profile option in the interactive information display screen that provides an opportunity to set preference profile settings.

243. The system defined in claim 184 wherein the user television equipment is configured to display a preference profile option in the interactive information display screen that provides an opportunity to remove preference profile settings.

244. The system defined in claim 184 wherein the user television equipment is configured to display a preference profile option in the interactive

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information display screen that provides an opportunity to change preference profile settings.

245. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to user preference profiles when the programming-related item is a program.

246. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to user preference profiles when the programming-related item is a channel.

247. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to other showings of the selected programming-related item when the selected programming-related item is a program.

248. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to a specific other showing of the selected programming-related item when the selected programming-related item is a program.

249. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to a specific other showing of the

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selected programming-related item when the selected programming-related item is a program and is configured to display an interactive information display screen for the specific other showing.

250. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to a specific other showing of the selected programming-related item when the selected programming-related item is a program and is configured to display an information display screen containing a list of other showings as individual options.

251. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to other showings of the selected programming-related item when the selected programming-related item is a program, is configured to display an information display screen containing a list of the other showings as individual options, and is configured to allow the user to navigate to other showings which are available but not yet displayed.

252. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to other showings of the selected programming-related item when the selected programming-related item is a program and is configured to display an information display screen having a list of the



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other showings as individual options and having information on a highlighted one of the other showings.

253. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to other showings of the selected programming-related item when the selected programming-related item is a program, is configured to display an information display screen having a list of the other showings as individual options, and is configured to display an interactive information display screen for the selected one of the other showings.

254. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to all other program showings having the same title as the selected programming-related item when the selected programming-related item is a program.

255. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to all other showings for the same selected programming-related item when the selected programming-related item is a program.

256. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen that is related to all other program showings that are

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part of the selected programming-related item when the selected programming-related item is a program grouping.

257. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen which is related to recording the selected programming-related item.

258. The system defined in claim 184 wherein the user television equipment is configured to display a record option in the interactive information display screen which when selected directs a videocassette recorder to record the selected programming-related item.

259. The system defined in claim 184 wherein the user television equipment is configured to display a record option in the interactive information display screen which when selected directs a video recording device at a television distribution facility to record the selected programming-related item.

260. The system defined in claim 184 wherein the user television equipment is configured to display a record option in the interactive information display screen which when selected directs a local digital storage device to record the selected programming-related item.

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261. The system defined in claim 184 wherein the user television equipment is configured to display a record option in the interactive information display screen for recording the selected programming-related item when the selected programming-related item is a program.

262. The system defined in claim 184 wherein the user television equipment is configured to display a record option in the interactive information display screen for recording the selected programming-related item when the selected programming-related item is a program grouping.

263. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen for scheduling to record the selected programming-related item.

264. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen for deleting a scheduled recording of the selected programming-related item.

265. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen for modifying a scheduled recording of the selected programming-related item.

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266. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen for recording the selected programming-related item when the selected programming-related item is a currently airing program

267. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen which is related to a program grouping of the selected programming-related item.

268. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping option in the interactive information display screen when the selected programming-related item is part of a program series.

269. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping option in the interactive information display screen when the selected programming-related item is part of a mini-series.

270. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping option in the interactive information display screen when the selected programming-related item is part of a sports series.

271. The system defined in claim 184 wherein the user television equipment is configured to display

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a program grouping option in the interactive information display screen when the selected programming-related item is part of a package.

272. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping option in the interactive information display screen for accessing an interactive information display screen for a program grouping which is related to the selected programming-related item when the selected programming-related item is a program.

273. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping option in the interactive information display screen for accessing an interactive information display screen for a program grouping which is related to the selected programming-related item when the selected programming-related item is a channel.

274. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping option in the interactive information display screen for accessing an interactive information display screen for a program grouping containing the selected programming-related item.

275. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping option in the interactive information display screen for displaying a list of

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program groupings which contain the selected programming-related item.

276. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping option in the interactive information display screen for accessing an interactive information display screen for a package containing the selected programming-related item.

277. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping option in the interactive information display screen for displaying a list of packages which contain the selected programming-related item.

278. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping component option in the interactive information display screen for accessing information on a component of the selected programming-related item when the selected programming-related item is a program grouping.

279. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping component option in the interactive information display screen for displaying an interactive information display screen for a program component of the selected programming-related item when the selected programming-related item is a package.

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280. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping component option in the interactive information display screen for displaying an interactive information display screen for a channel component of the selected programming-related item when the selected programming-related item is a package.

281. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping component option in the interactive information display screen for displaying an interactive information display screen for a program component of the selected programming-related item when the selected programming-related item is a program series.

282. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping component option in the interactive information display screen for displaying an interactive information display screen for a program component of the selected programming-related item when the selected programming-related item is a mini-series.

283. The system defined in claim 184 wherein the user television equipment is configured to display a program grouping component option in the interactive information display screen for displaying an interactive information display screen for a program component of the selected programming-related item when the selected programming-related item is a sports series.

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284. The system defined in claim 184 wherein the user television equipment is configured to display an e-mail option in the interactive information display screen.

285. The system defined in claim 184 wherein the user television equipment is configured to display an e-mail option in the interactive information display screen for sending e-mail to an address which is related to the selected programming-related item.

286. The system defined in claim 184 wherein the user television equipment is configured to display an e-mail option in the interactive information display screen for sending a recorded copy of at least part of the selected programming-related item.

287. The system defined in claim 184 wherein the user television equipment is configured to display an e-mail option in the interactive information display screen for sending an authorization to view the selected programming-related item.

288. The system defined in claim 184 wherein the user television equipment is configured to display an e-mail option in the interactive information display screen for sending an image from the selected programming-related item.

289. The system defined in claim 184 wherein the user television equipment is configured to display an e-mail option in the interactive information display



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screen for sending a video clip which is related to the selected programming-related item.

290. The system defined in claim 184 wherein the user television equipment is configured to display an e-mail option in the interactive information display screen for sending a merchandise related to the selected programming-related item.

291. The system defined in claim 184 wherein the user television equipment is configured to display an e-mail option in the interactive information display screen for sending program guide information related to the selected programming-related item.

292. The system defined in claim 184 wherein the user television equipment is configured to display a feedback option in the interactive information display screen.

293. The system defined in claim 184 wherein the user television equipment is configured to display a data service option in the interactive information display screen for accessing a data service which is related to the selected programming-related item.

294. The system defined in claim 184 wherein the user television equipment is configured to display an option in the interactive information display screen for selecting to run an application which is related to the selected programming-related item.

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295. The system defined in claim 184 wherein the user television equipment is configured to display a chat option in the interactive information display screen.

296. The system defined in claim 184 wherein the user television equipment is configured to display a chat option in the interactive information display screen for joining a chat session related to the selected programming-related item.

297. The system defined in claim 184 wherein the user television equipment is configured to display a chat option in the interactive information display screen for initiating a chat session related to the selected programming-related item.

298. The system defined in claim 184 wherein the user television equipment is configured to display a chat option in the interactive information display screen for scheduling a reminder for a chat session related to the selected programming-related item.

299. The system defined in claim 184 wherein the user television equipment is configured to display an Internet option in the interactive information display screen for accessing a web page related to the selected programming-related item.

300. The system defined in claim 184 wherein the user television equipment is configured to display an Internet option in the interactive information

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display screen for displaying a list of web pages which are related to the selected programming-related item.

301. The system defined in claim 184 wherein the user television equipment is configured to display a video option in the interactive information display screen for displaying a video clip.

302. The system defined in claim 184 wherein the user television equipment is configured to display a video option in the interactive information display screen for displaying a video clip which is related to the selected programming-related item.

303. The system defined in claim 184 wherein the user television equipment is configured to display a video option in the interactive information display screen for downloading to local storage a video clip which is related to the selected programming-related item.

304. The system defined in claim 184 wherein the user television equipment is configured to display a video option in the interactive information display screen for displaying a portion of the selected programming-related item.

305. The system defined in claim 184 wherein the user television equipment is configured to display a related channel option in the interactive information display screen for displaying an interactive information display screen for a channel which is

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showing the selected programming-related item when the selected programming-related item is a program.

306. The system defined in claim 184 wherein the user television equipment is configured to display a related network option in the interactive information display screen for displaying an interactive information display screen for a network which is showing the selected programming-related item when the selected programming-related item is a program.

307. The system defined in claim 184 wherein the user television equipment is configured to display a current program option in the interactive information display screen for displaying an interactive information display screen for a current program which is being shown on the selected programming-related item when the selected programming-related item is a channel.

308. The system defined in claim 184 wherein the user television equipment is configured to display a current program option in the interactive information display screen for displaying an interactive information display screen for a current program which is being shown on the selected programming-related item when the selected programming-related item is a network.

309. The system defined in claim 184 wherein the user television equipment is configured to display an upcoming program option in the interactive information display screen for displaying an

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interactive information display screen for a program which is to be shown on the selected programming-related item when the selected programming-related item is a channel.

310. The system defined in claim 184 wherein the user television equipment is configured to display an upcoming program option in the interactive information display screen for displaying an interactive information display screen for a program which is to be shown on the selected programming-related item when the selected programming-related item is a network.

311. The system defined in claim 184 wherein the user television equipment is configured to display a local channel option in the interactive information display screen for displaying an interactive information display screen for a channel which is a local affiliate of the selected programming-related item when the selected programming-related item is a network.

312. The system defined in claim 184 wherein the user television equipment is configured to display a program listings option in the interactive information display screen for displaying a list of programs scheduled to be shown on the selected programming-related item when the selected programming-related item is a channel.

313. The system defined in claim 184 wherein the user television equipment is configured to display

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a program listings option in the interactive information display screen for displaying a list of programs scheduled to be shown on the selected programming-related item when the selected programming-related item is a network.

314. The system defined in claim 184 wherein the user television equipment is configured to display a tune-to-channel option in the interactive information display screen when the selected programming-related item is a channel.

315. The system defined in claim 314 wherein the user television equipment is configured to rename the tune-to-channel option when the selected programming-related item is a music channel.

316. The system defined in claim 184 wherein the user television equipment is configured to display a view option in the interactive information display screen for viewing the selected programming-related item when the selected programming-related item is a program.

317. The system defined in claim 184 wherein the user television equipment is configured to display a tune-to-channel option in the interactive information display screen for tuning to a channel which will show the selected programming-related item when the selected programming-related item is an upcoming program.

318. A television system, comprising:

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user television equipment on which an interactive application is at least partially implemented, wherein the user television equipment is configured to provide a user with an opportunity to select one of multiple programming-related items to access associated information on the item and is further configured to display an interactive information display screen that includes the information associated with a selected item and that includes user-selectable hyperlinks to other information display screens having information about programming-related items that are different from but related to the selected item.

319. The system defined in claim 318 wherein the user television equipment is further configured to provide various features, to determine which features are available to be exercised in connection with the selected programming-related item, and to provide the determined features for the selected programming-related item in the information display screen.

320. The system defined in claim 318 wherein the user television equipment is further configured to provide a reminder option which is selectable from the interactive information display screen for exercising a program guide reminder feature in connection with the selected programming-related item.

321. The system defined in claim 318 wherein the user television equipment is further configured to provide a view option which is selectable from the

- 138 -

interactive information display screen for exercise in connection with the selected programming-related item.

322. The system defined in claim 318 wherein the user television equipment is further configured to provide a listen option which is selectable from the interactive information display screen for exercising a listen feature in connection with the selected programming-related item.

323. The system defined in claim 318 wherein the user television equipment is further configured to provide a tune-to-channel option which is selectable from the interactive information display screen for exercising a tune-to-channel feature in connection with the selected programming-related item.

324. The system defined in claim 318 wherein the user television equipment is further configured to provide a parental control option which is selectable from the interactive information display screen for exercising a parental control feature in connection with the selected programming-related item.

325. The system defined in claim 318 wherein the user television equipment is further configured to provide a purchase option which is selectable from the interactive information display screen for exercising a purchase feature in connection with the selected programming-related item.

326. The system defined in claim 318 wherein the user television equipment is further configured to



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provide an other channel/time option which is selectable from the interactive information display screen for exercising a program guide other channel/time feature in connection with the selected programming-related item.

327. The system defined in claim 318 wherein the user television equipment is further configured to provide an a preference profile option which is selectable from the interactive information display screen for exercising a preference profile feature in connection with the selected programming-related item.

328. The system defined in claim 318 wherein the user television equipment is further configured to provide a record option which is selectable from the interactive information display screen for exercising a record feature in connection with the selected programming-related item.

329. The system defined in claim 318 wherein the user television equipment is further configured to provide a package hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for a package which includes the selected programming-related item.

330. The system defined in claim 318 wherein the user television equipment is further configured to provide a network hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen

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for a network which is related to the selected programming-related item.

331. The system defined in claim 318 wherein the user television equipment is further configured to provide a channel hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for a channel which is related to the selected programming-related item.

332. The system defined in claim 318 wherein the user television equipment is further configured to determine whether the selected programming-related item is a channel and to provide a current program hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for a current program on the channel.

333. The system defined in claim 318 wherein the user television equipment is further configured to determine whether the selected programming-related item is a channel and to provide an upcoming program hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for an upcoming program on the channel.

334. The system defined in claim 318 wherein the user television equipment is further configured to provide a web page option which is selectable from the interactive information display screen for displaying a

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web page which is related to the selected programming-related item.

335. The system defined in claim 318 wherein the user television equipment is further configured to provide a chat session option which is selectable from the interactive information display screen for displaying a chat session which is related to the selected programming-related item.

336. The system defined in claim 318 wherein the user television equipment is further configured to provide an e-mail option which is selectable from the interactive information display screen for drafting an e-mail message to an address related to the selected programming-related item.

337. The system defined in claim 318 wherein the user television equipment is further configured to display a status indicator within the interactive information display screen for providing status information on the selected programming-related item.

338. The system defined in claim 318 wherein the user television equipment is further configured to provide options for the selected programming-related item and to display the option within the interactive information display screen.

339. The system defined in claim 318 wherein the user television equipment is further configured to provide options for the selected programming-related

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item, to display some of the options, and to scroll to display the other options.

340. The system defined in claim 318 wherein the user television equipment is further configured to provide a program listings option which is selectable from the interactive information display screen for exercising a program guide program listing feature in connection with the selected programming-related item.

341. The system defined in claim 318 wherein the user television equipment is further configured to providing an exit option which is selectable from the interactive information display screen for exiting the interactive information display screen.

342. The system defined in claim 318 wherein the user television equipment is further configured to provide a last option which is selectable from the interactive information display screen for returning to a previous screen which was accessed by the user.

343. The system defined in claim 318 wherein the user television equipment is further configured to scroll the information about the selected programming-related item.

344. The system defined in claim 318 wherein the user television equipment is further configured to provide an add-to-favorites option which is selectable from the interactive information display screen for exercising a favorites feature in connection with the selected programming-related item.

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345. The system defined in claim 318 wherein the user television equipment is further configured to provide a program hyperlink which is selectable from the interactive information display screen for displaying an interactive information display screen for a program which is related to the selected programming-related item.

346. The system defined in claim 318 wherein the information display screen includes a graphic image.

347. The system defined in claim 318 wherein the information display screen includes a graphic image which is related to the selected programming-related item.

348. The system defined in claim 318 wherein the information display screen includes a graphic image which is selectable to access an information display screen for the graphic image.

349. The system defined in claim 318 wherein the information display screen includes video.

350. The system defined in claim 318 wherein the information display screen includes broadcast video related to the selected programming-related item.

351. The system defined in claim 318 wherein the information display screen includes broadcast video related to video that a user was previously viewing.

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352. The system defined in claim 318 wherein the information display screen includes a video clip.

353. The system defined in claim 318 wherein the information display screen includes a video clip which is related to the selected programming-related item.

354. The system defined in claim 318 wherein the information display screen includes a video clip to provide a preview for the selected programming-related item.

355. The system defined in claim 318 wherein the information display screen includes a video clip which is selectable to access an interactive information display screen for the video clip.

356. The system defined in claim 318 wherein the information display screen includes an advertisement.

357. The system defined in claim 318 wherein the information display screen includes an advertisement which is related to the selected programming-related item.

358. The system defined in claim 318 wherein the information display screen includes an advertisement which is selectable to access an interactive information display screen for the advertisement.

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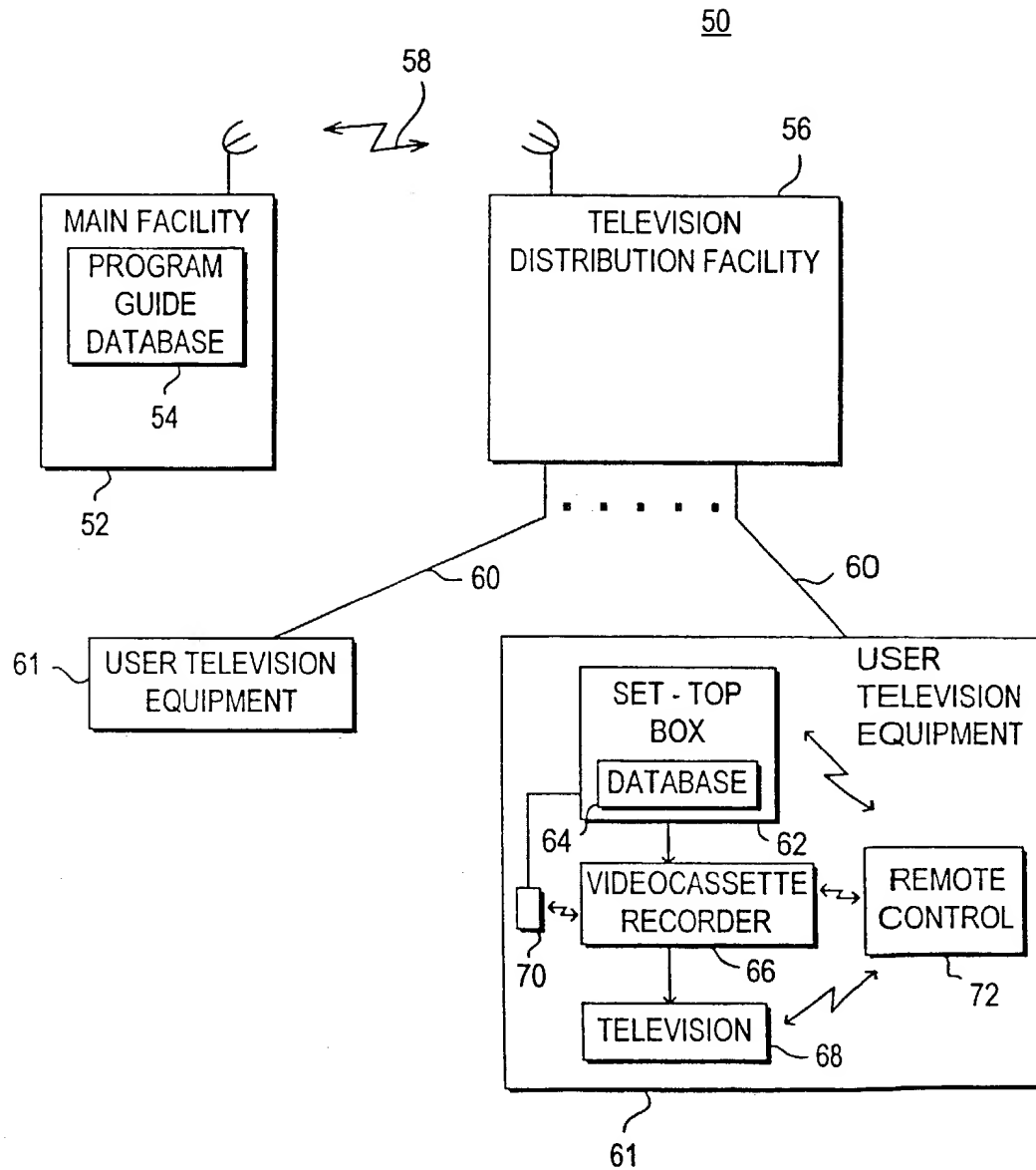


FIG. 1

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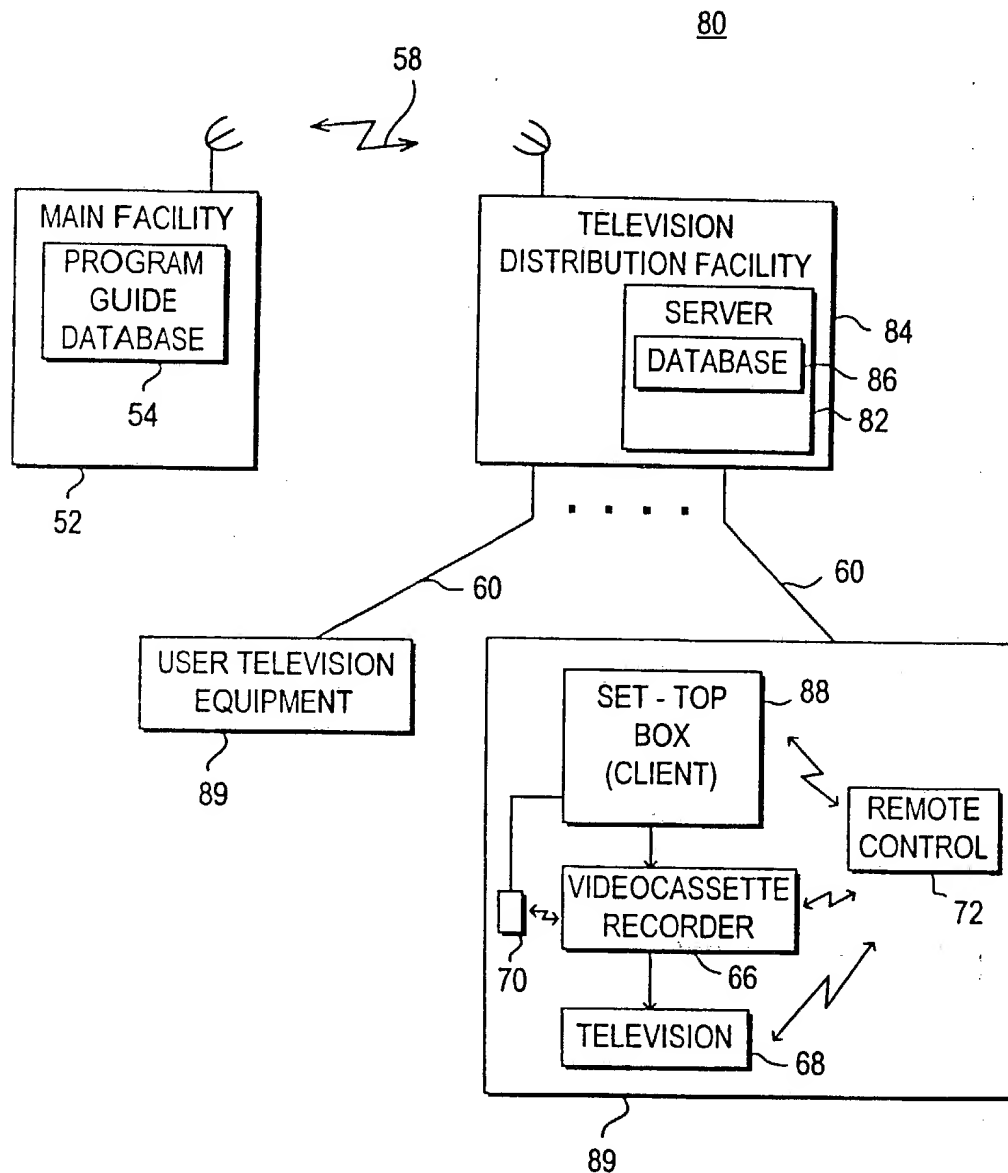


FIG. 2





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## EXAMPLES OF INITIATING DISPLAY SCREENS

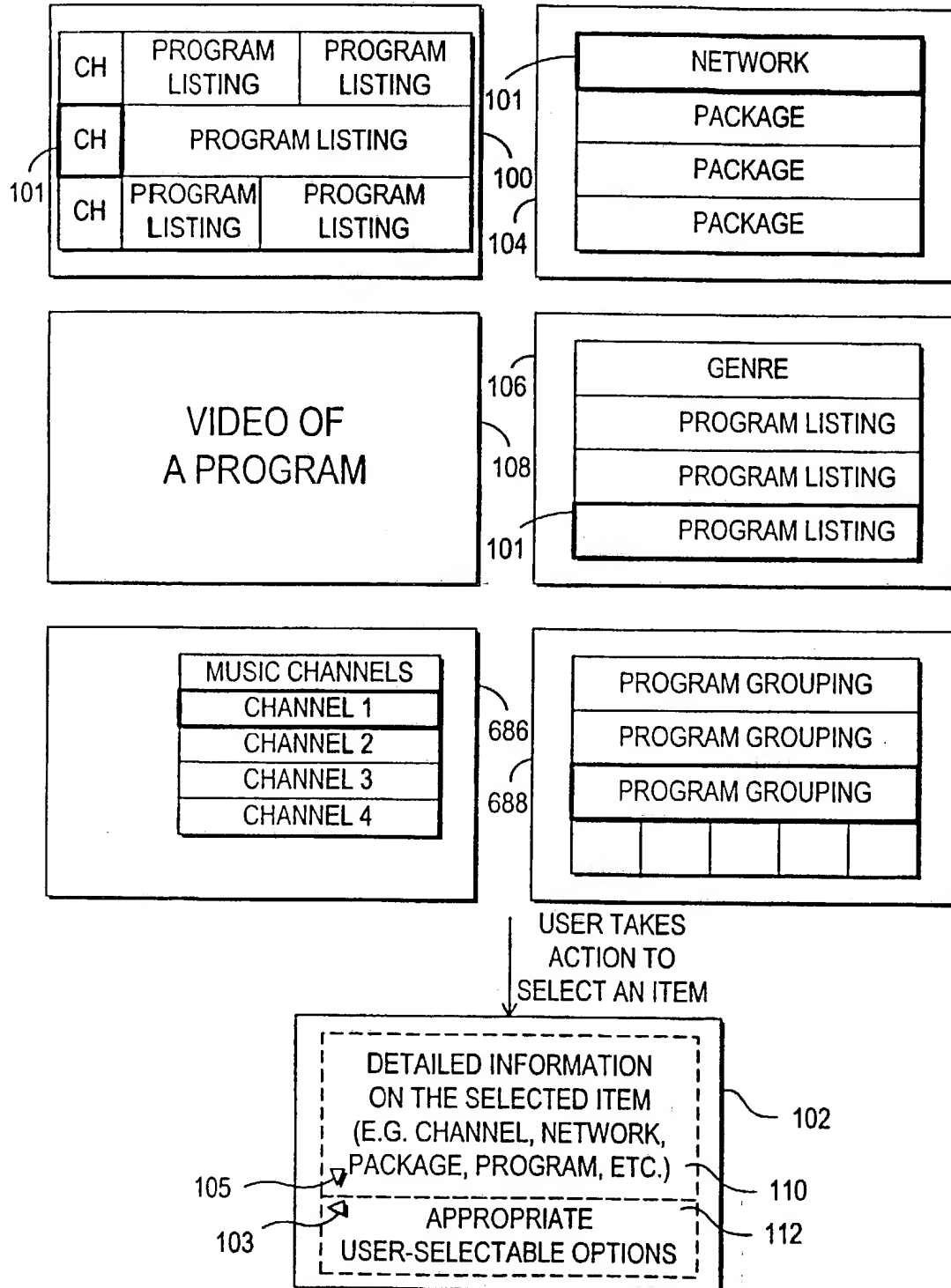


FIG. 4a

INTERACTIVE INFORMATION DISPLAY SCREEN  
FOR A SELECTED PROGRAM

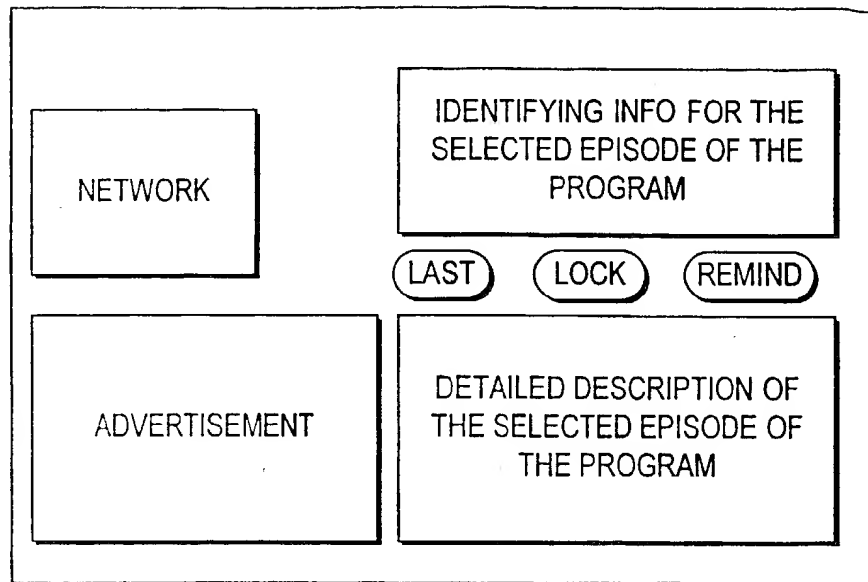


FIG. 4b

INTERACTIVE INFORMATION DISPLAY SCREEN  
FOR A SELECTED PAY-PER-NEW CHANNEL

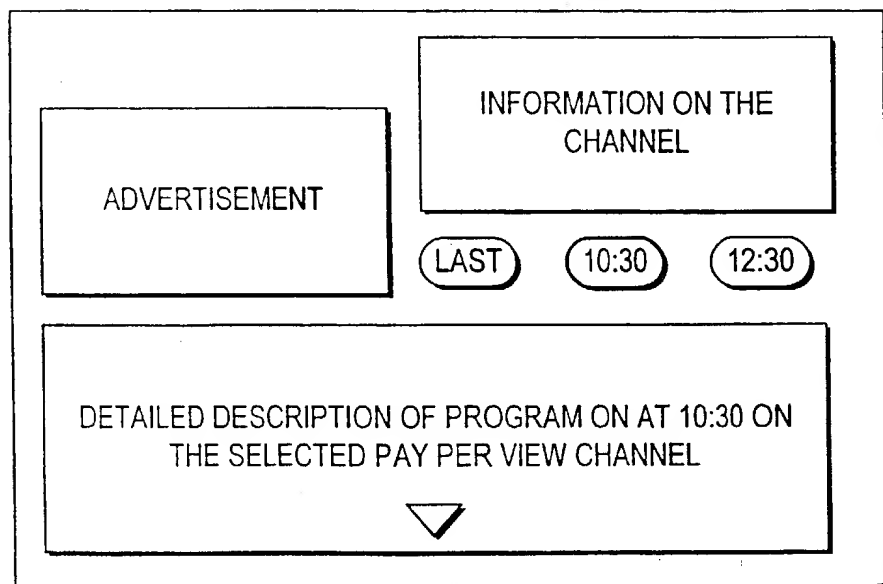


FIG. 4c

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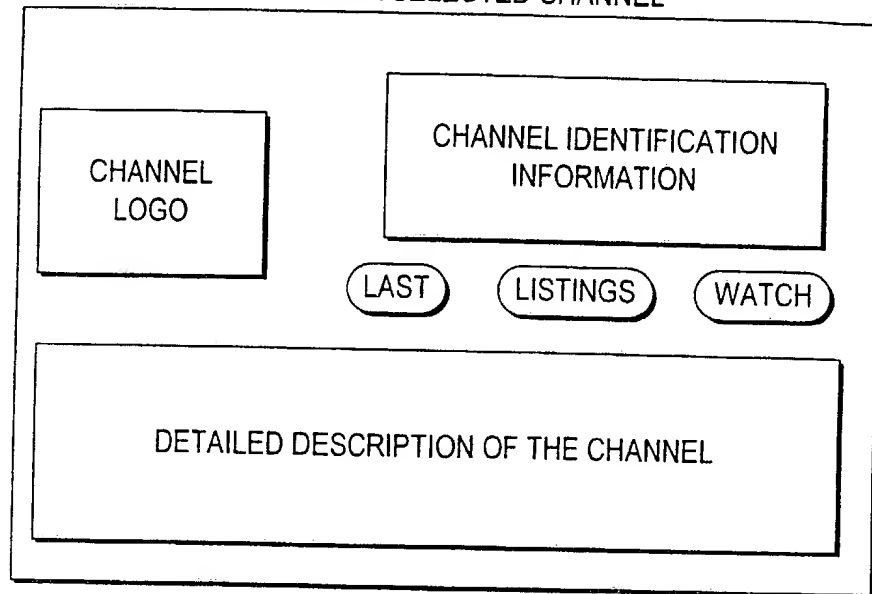
INTERACTIVE INFORMATION DISPLAY SCREEN  
FOR A SELECTED CHANNEL

FIG. 4d

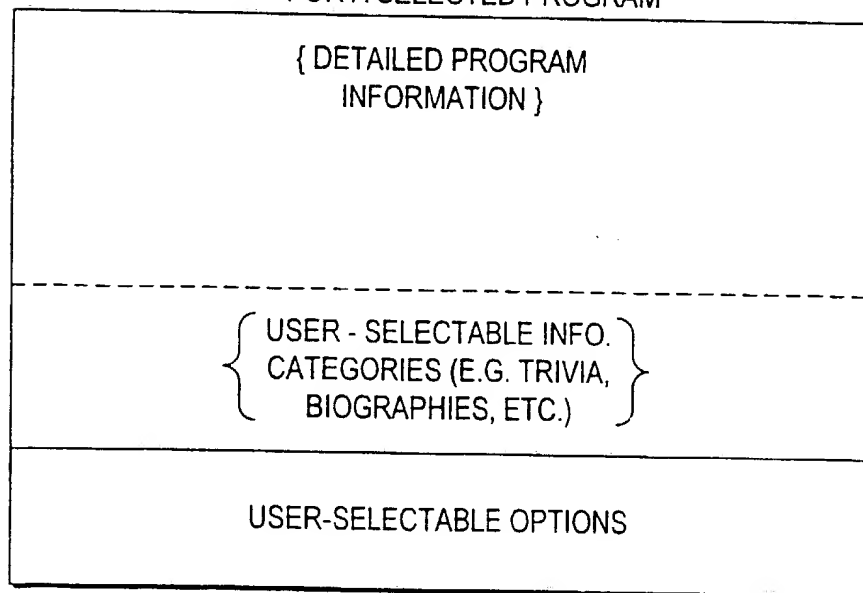
INTERACTIVE INFORMATION DISPLAY SCREEN  
FOR A SELECTED PROGRAM

FIG. 4e

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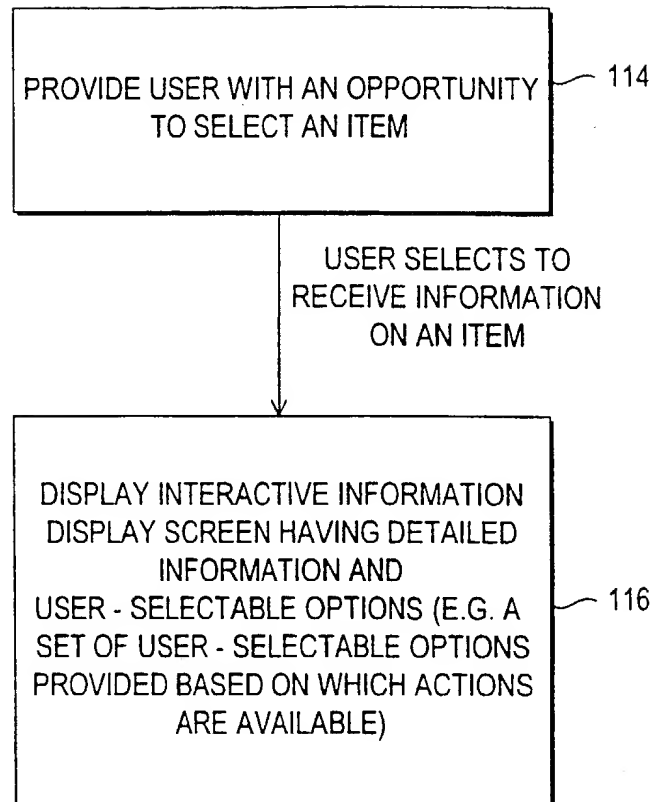
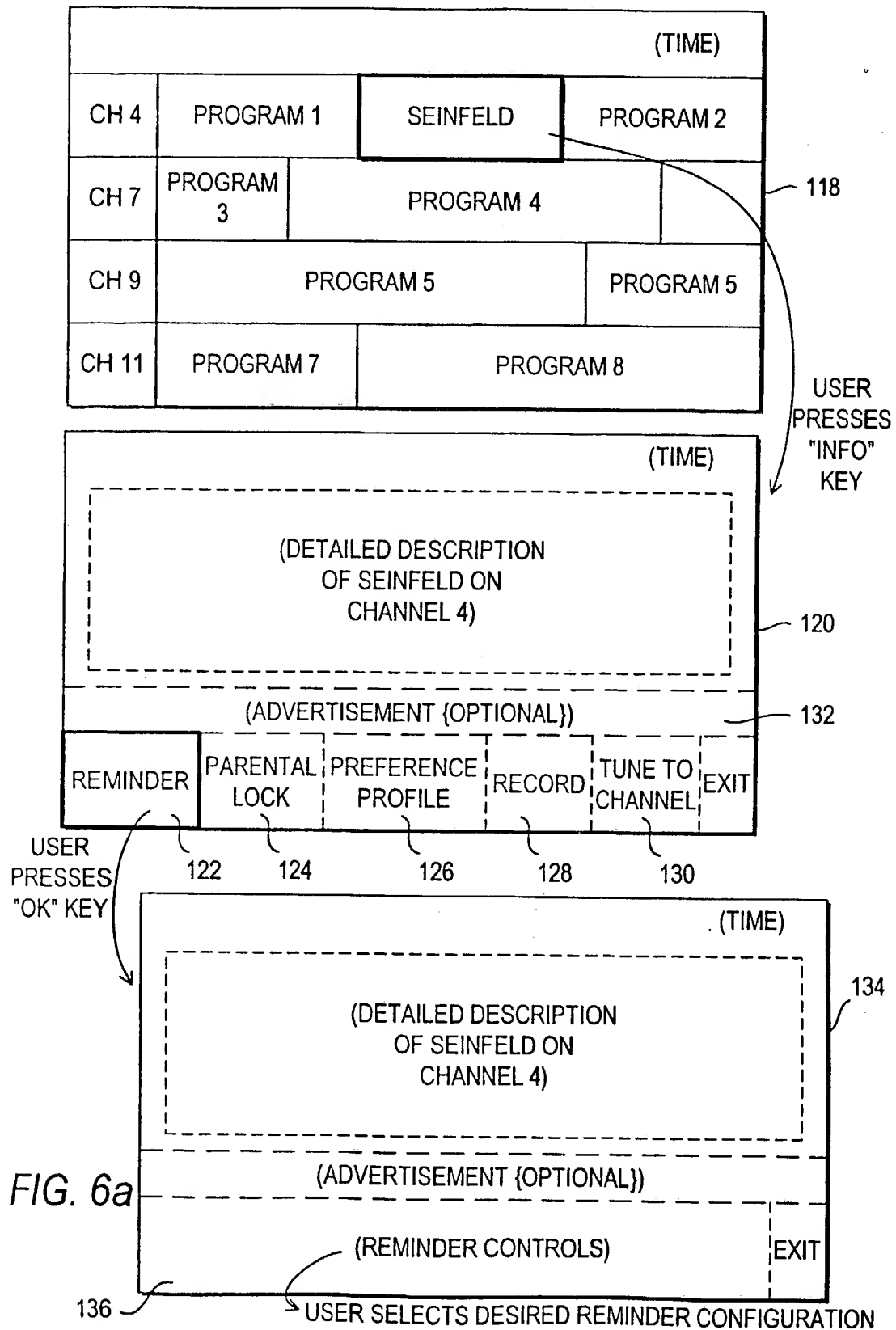


FIG. 5



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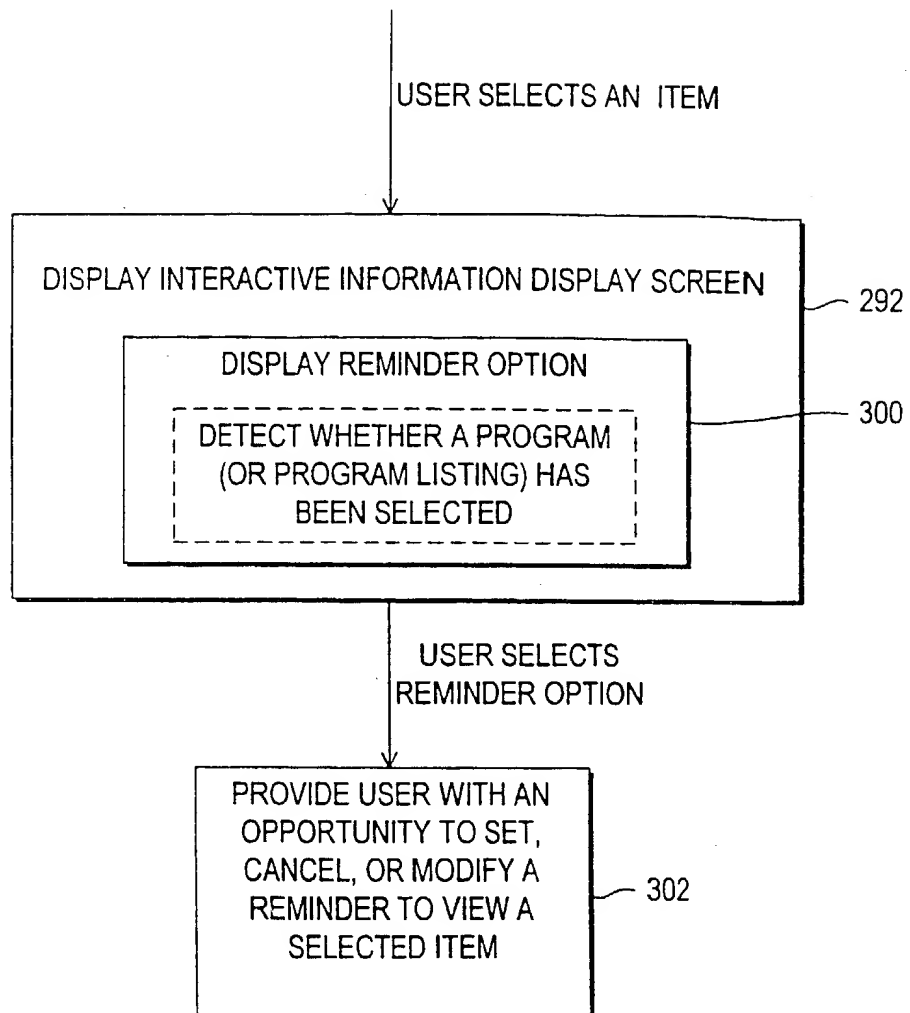


FIG. 6b

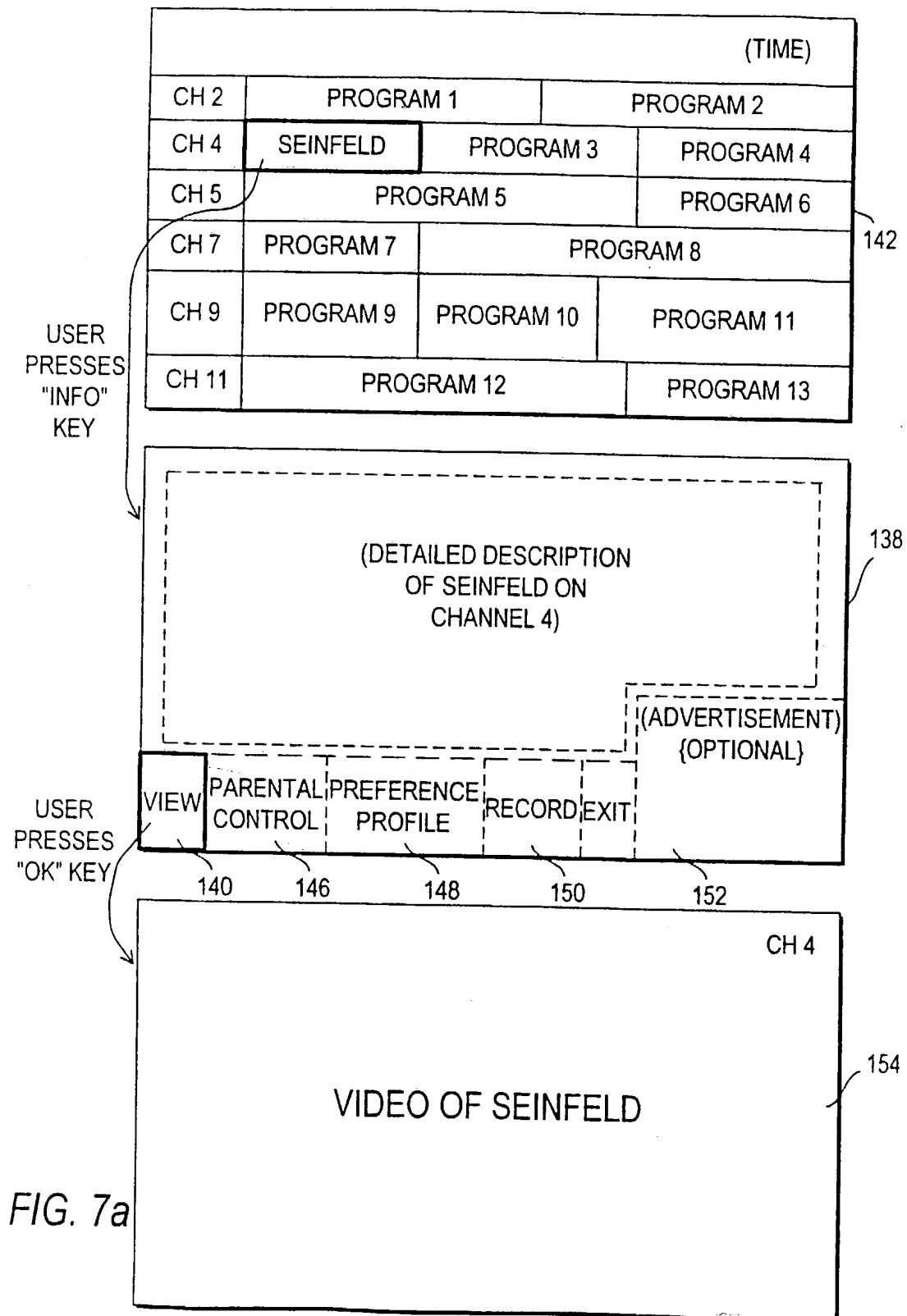


FIG. 7a



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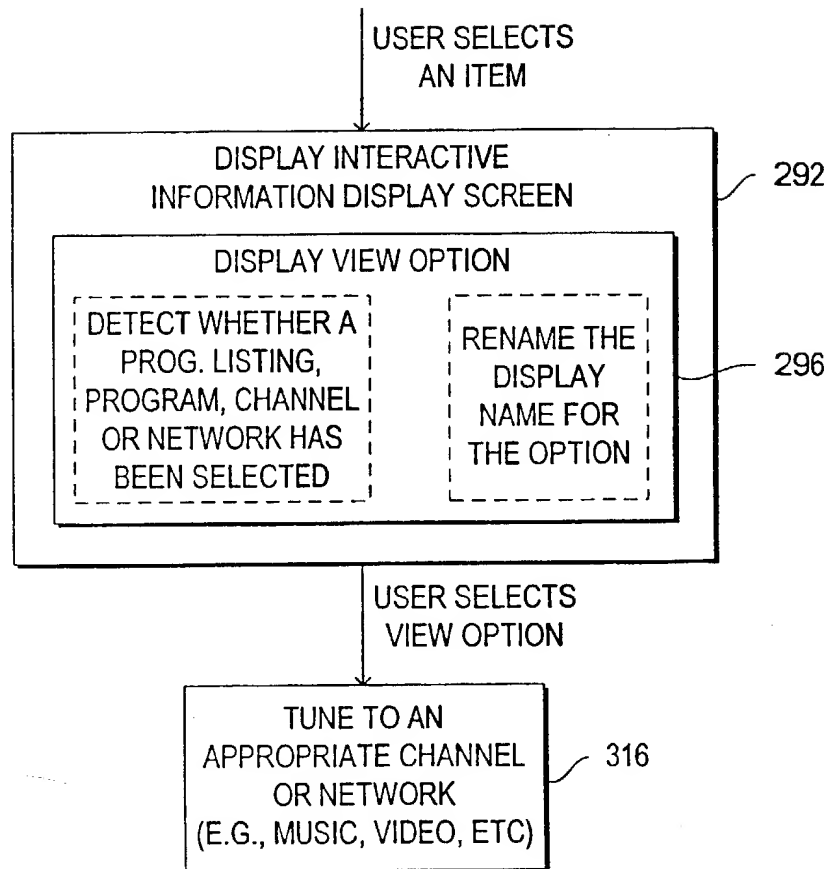


FIG. 7b

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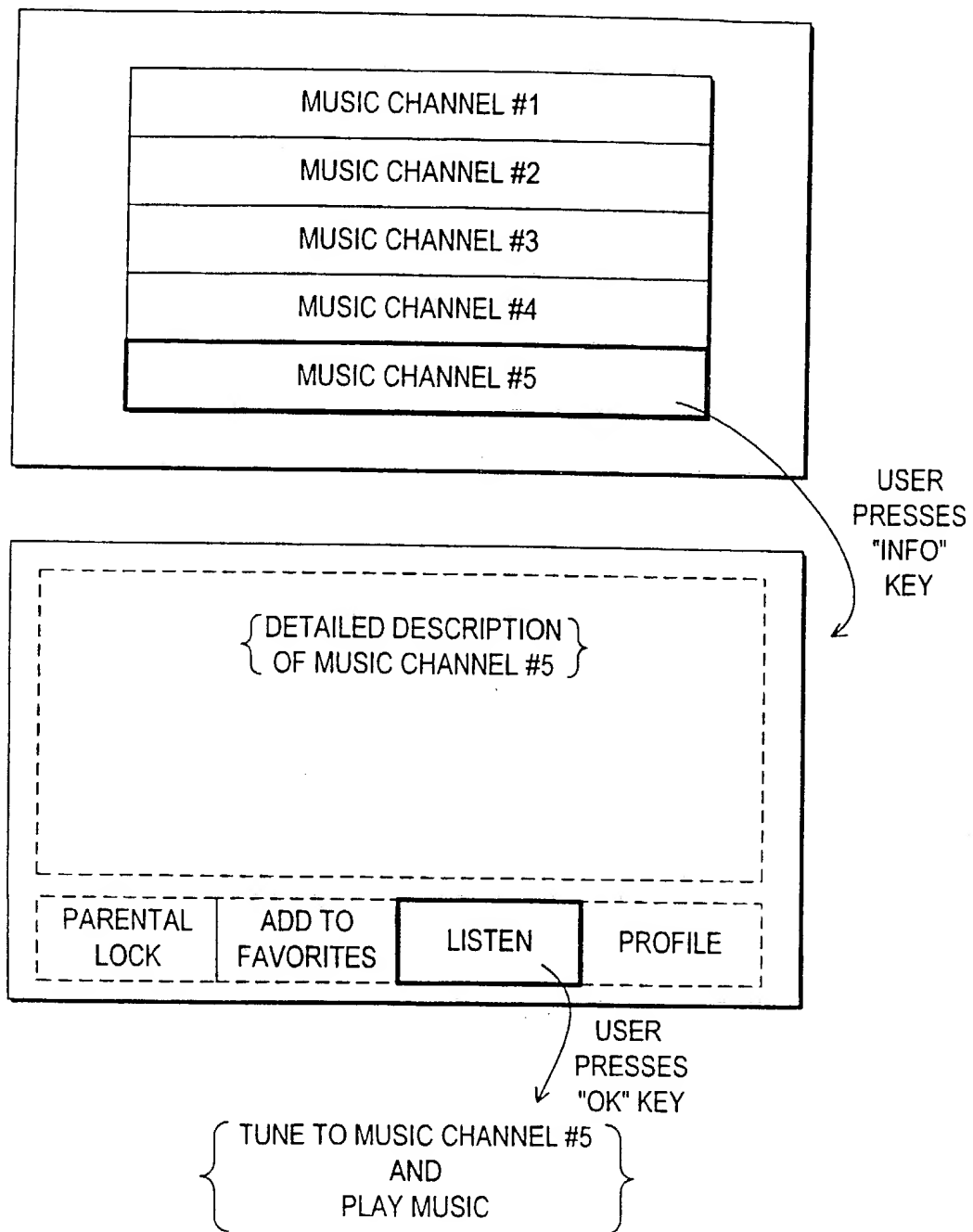


FIG. 7c

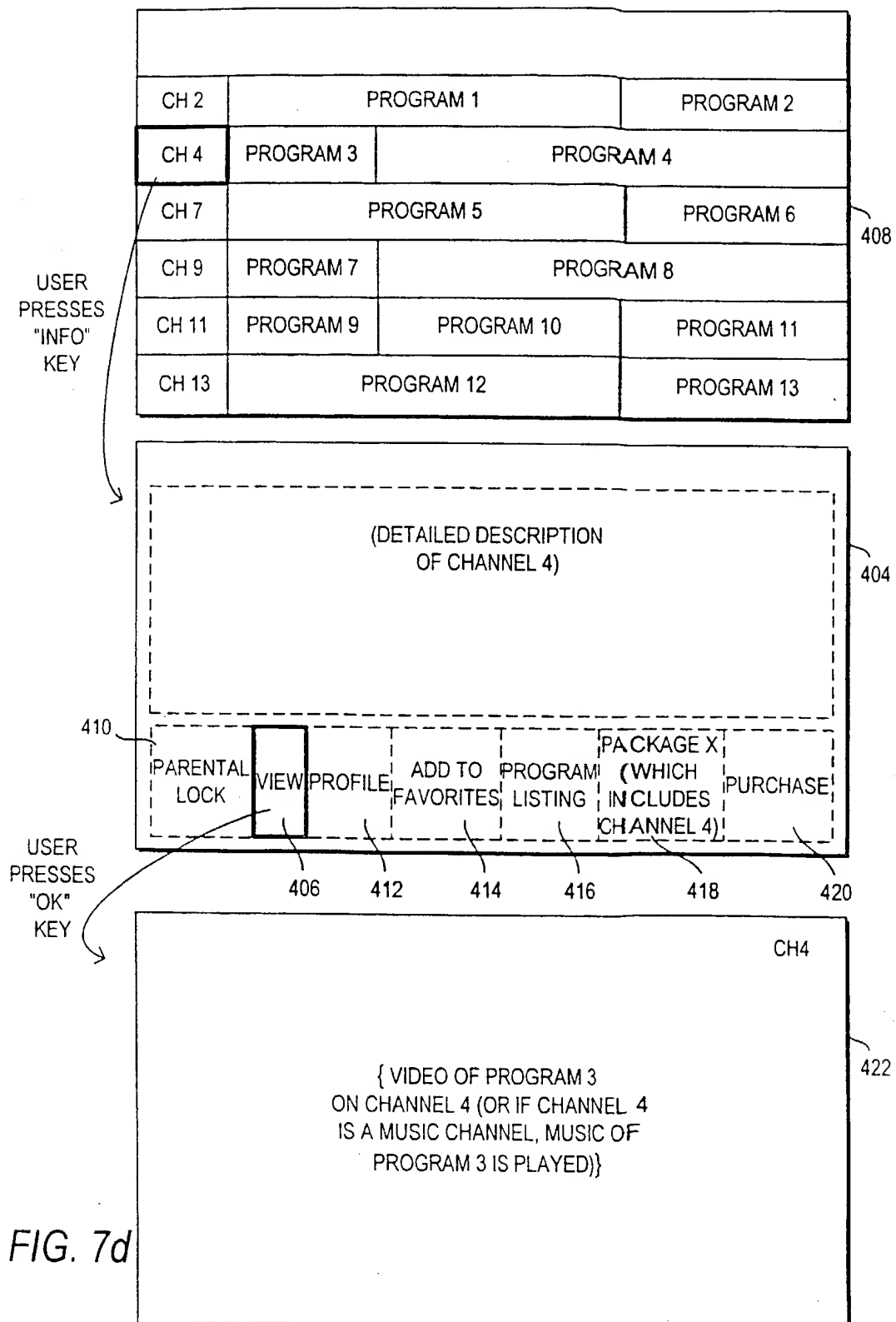


FIG. 7d

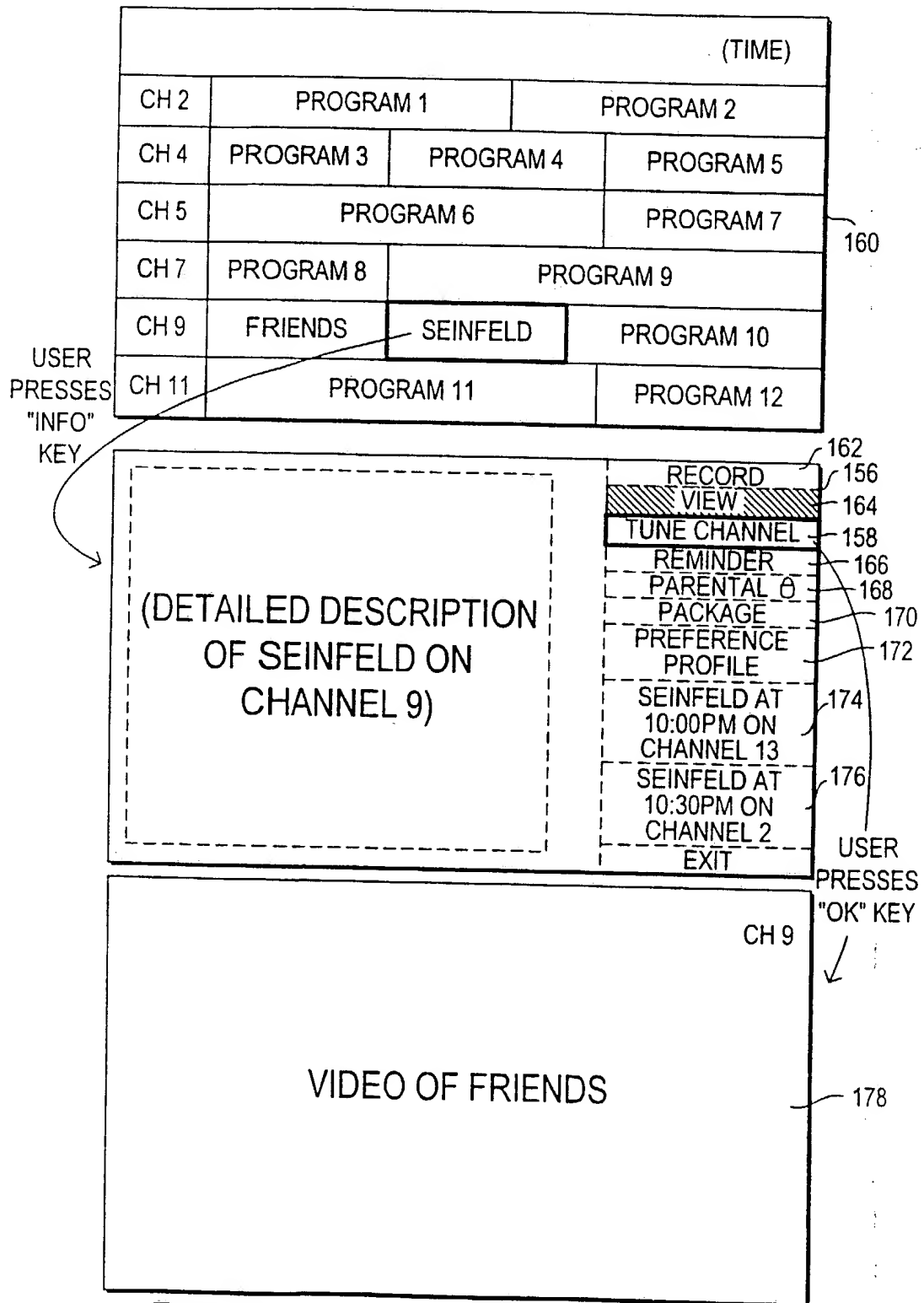


FIG. 8a

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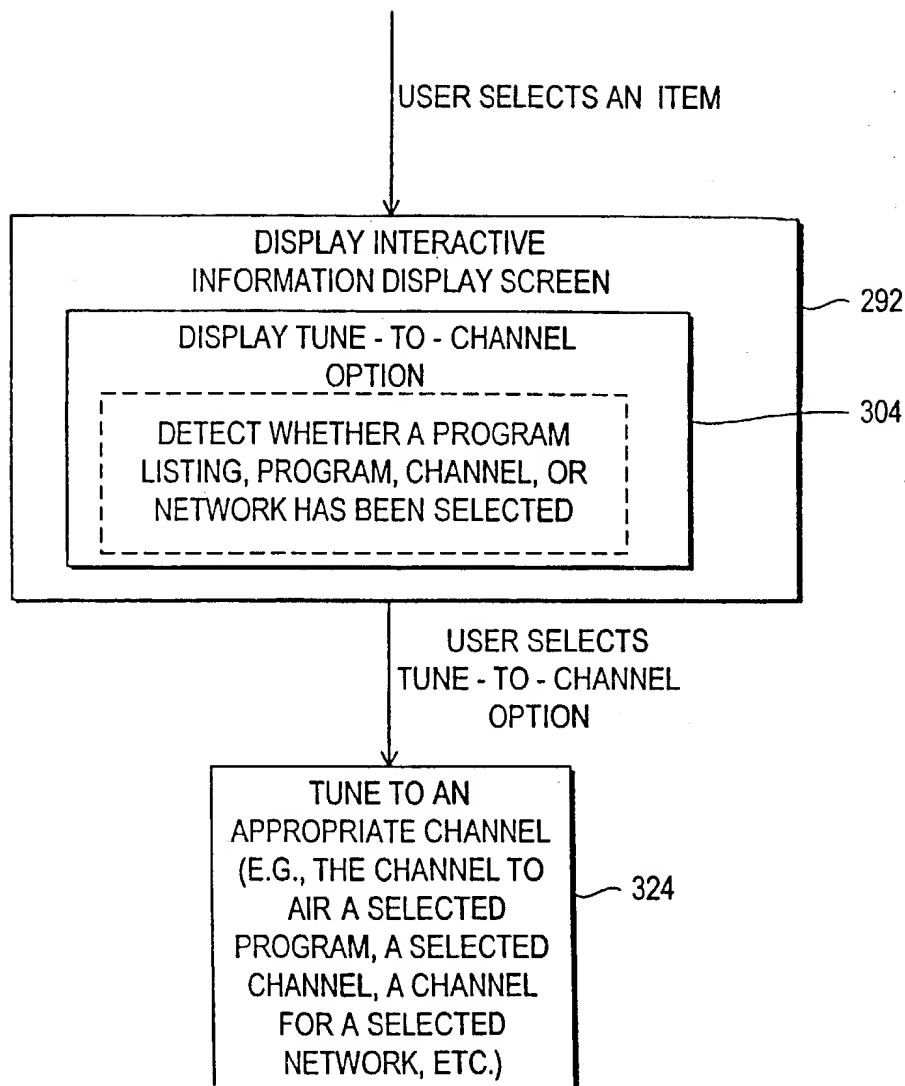
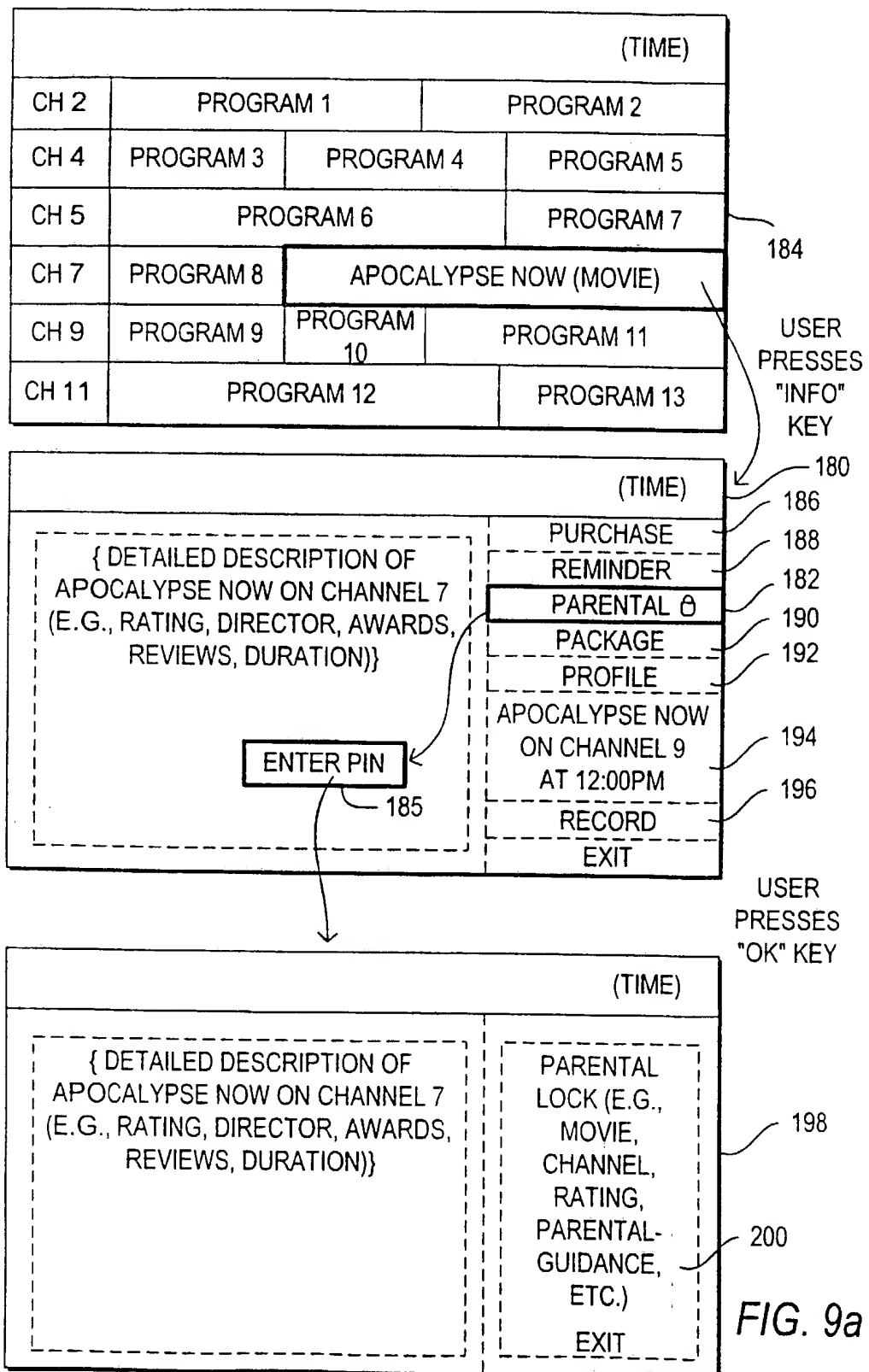


FIG. 8b



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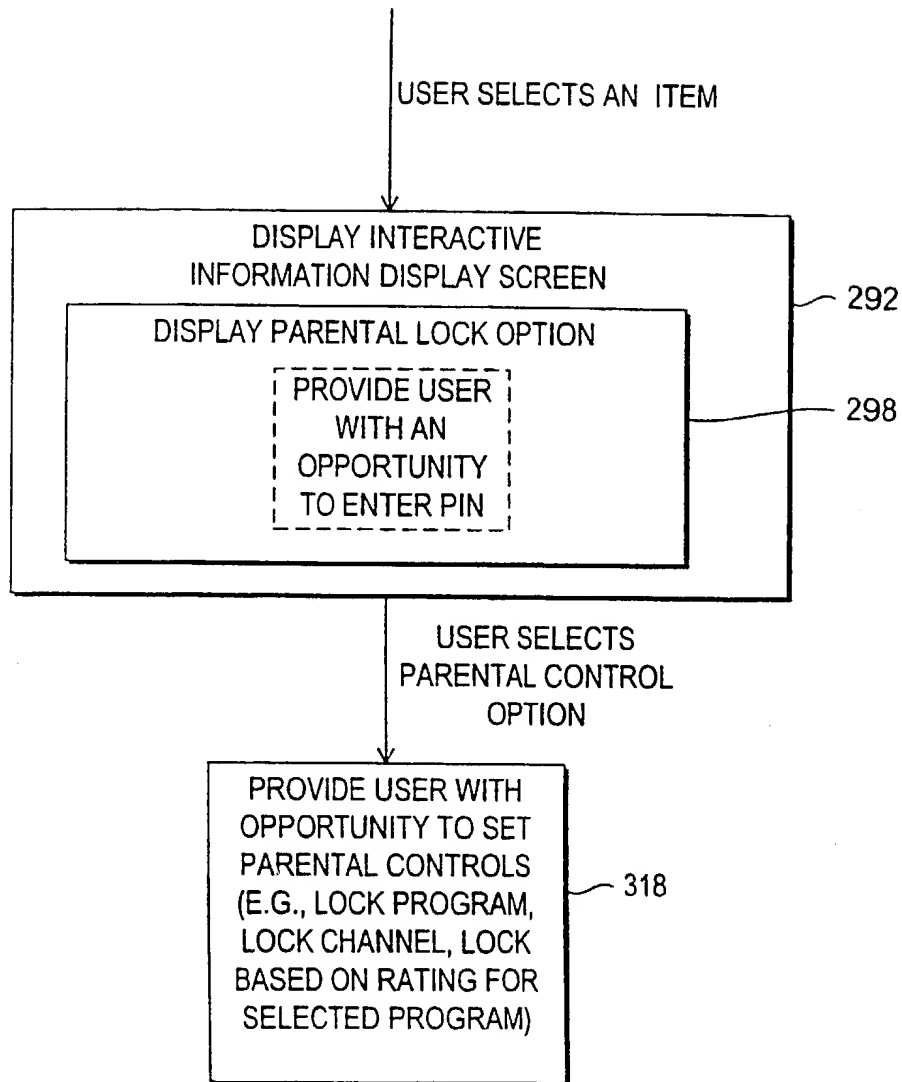


FIG. 9b

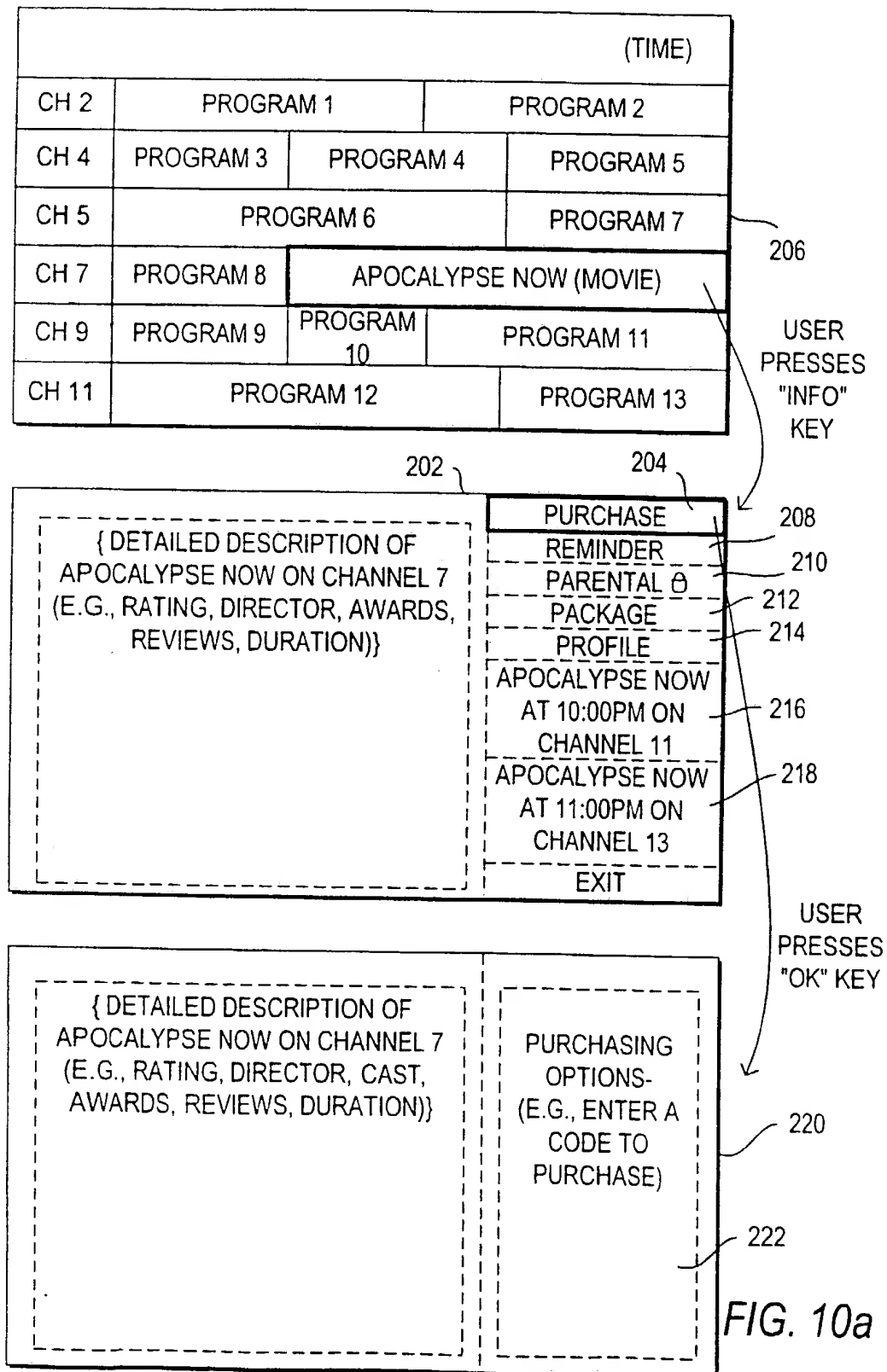


FIG. 10a



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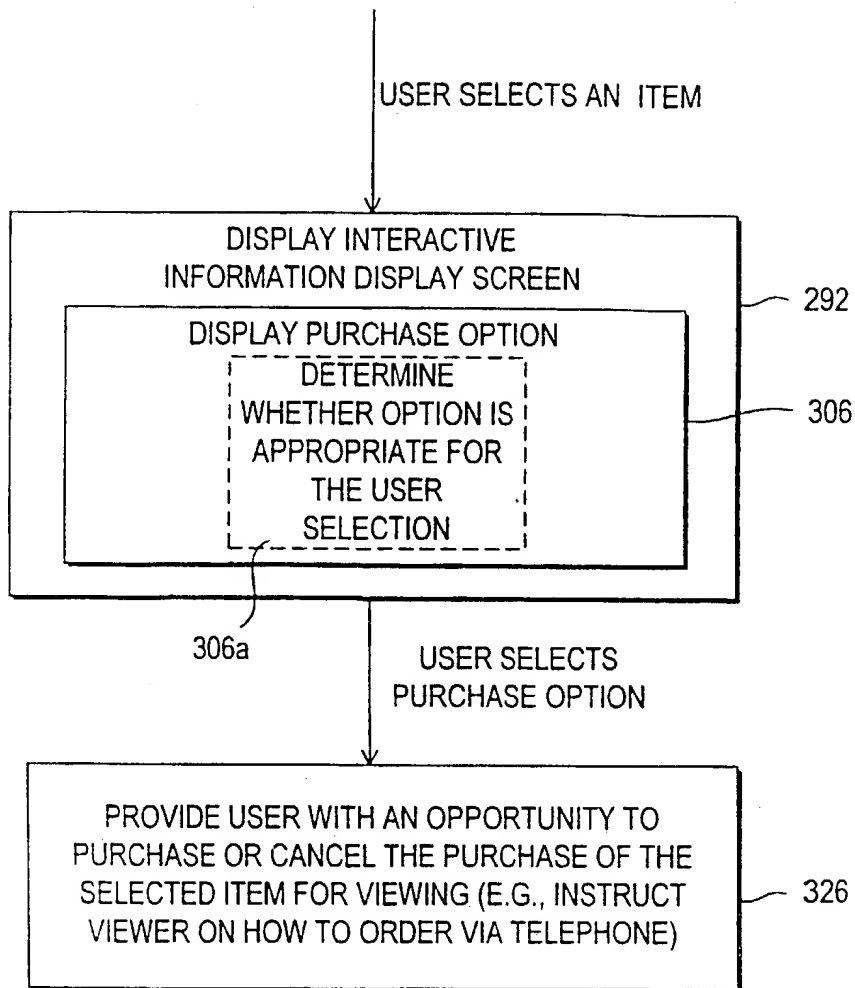
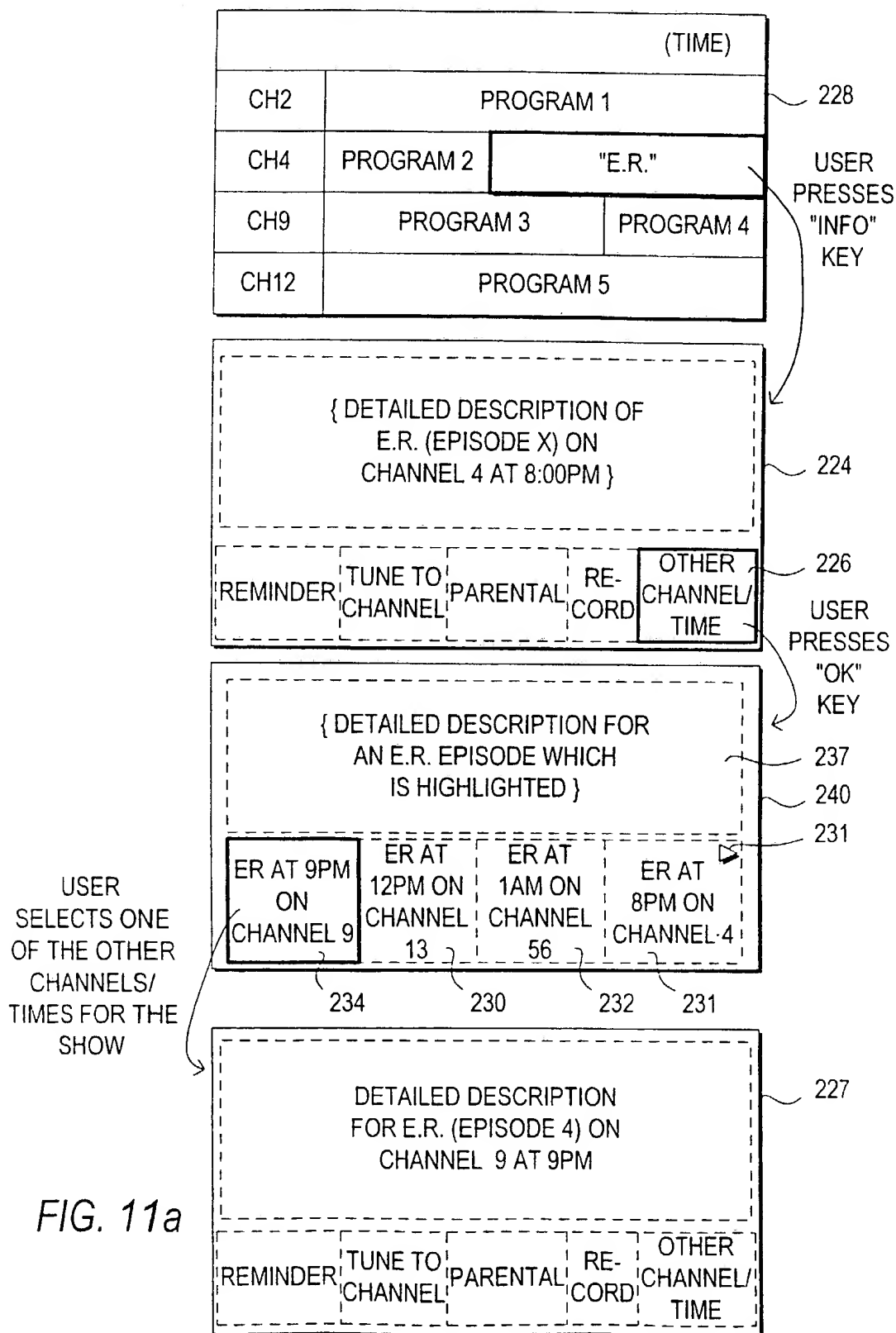


FIG. 10b

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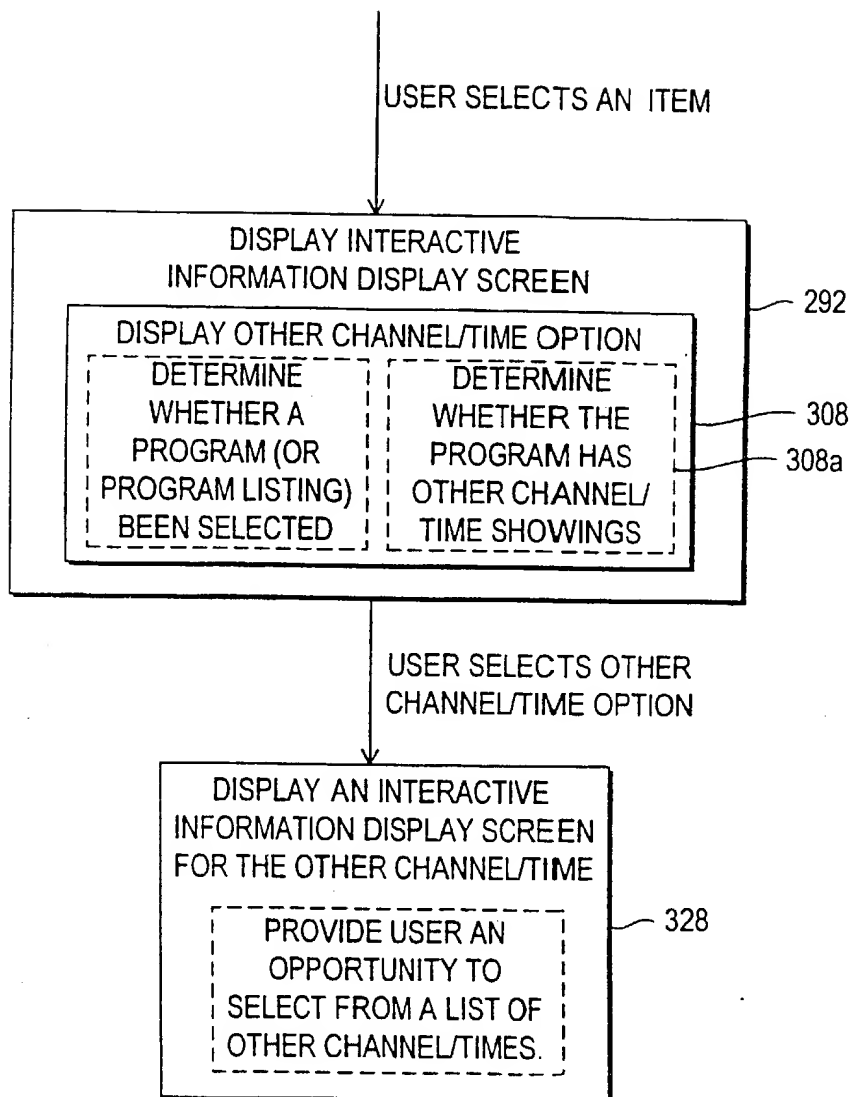


FIG. 11b

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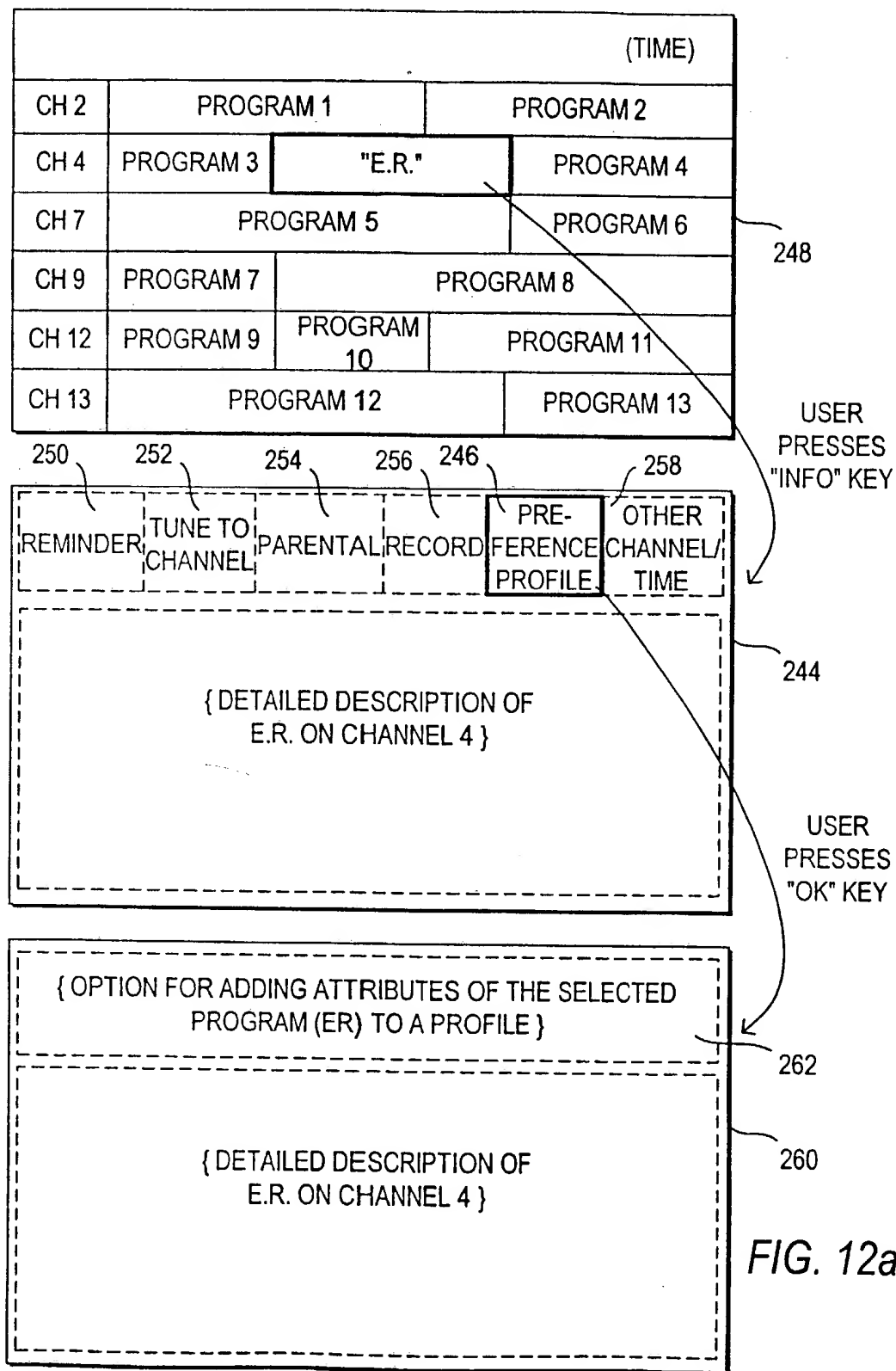


FIG. 12a

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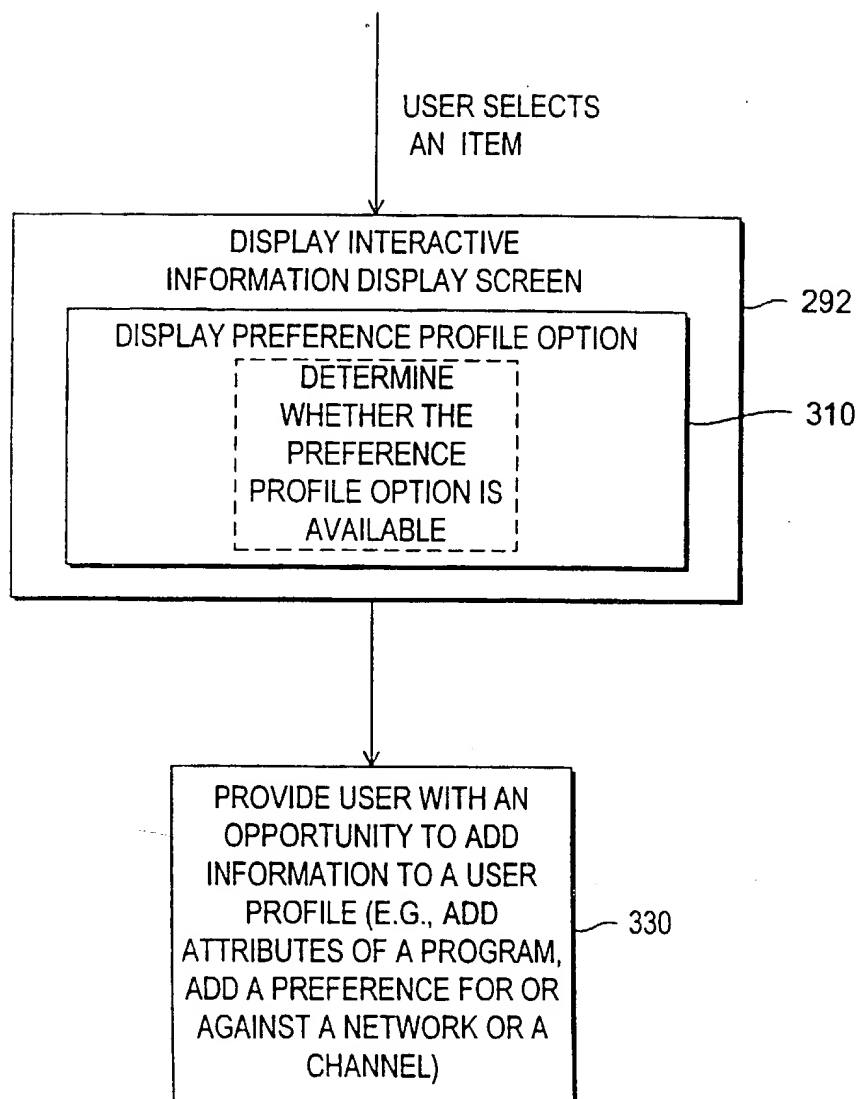


FIG. 12b

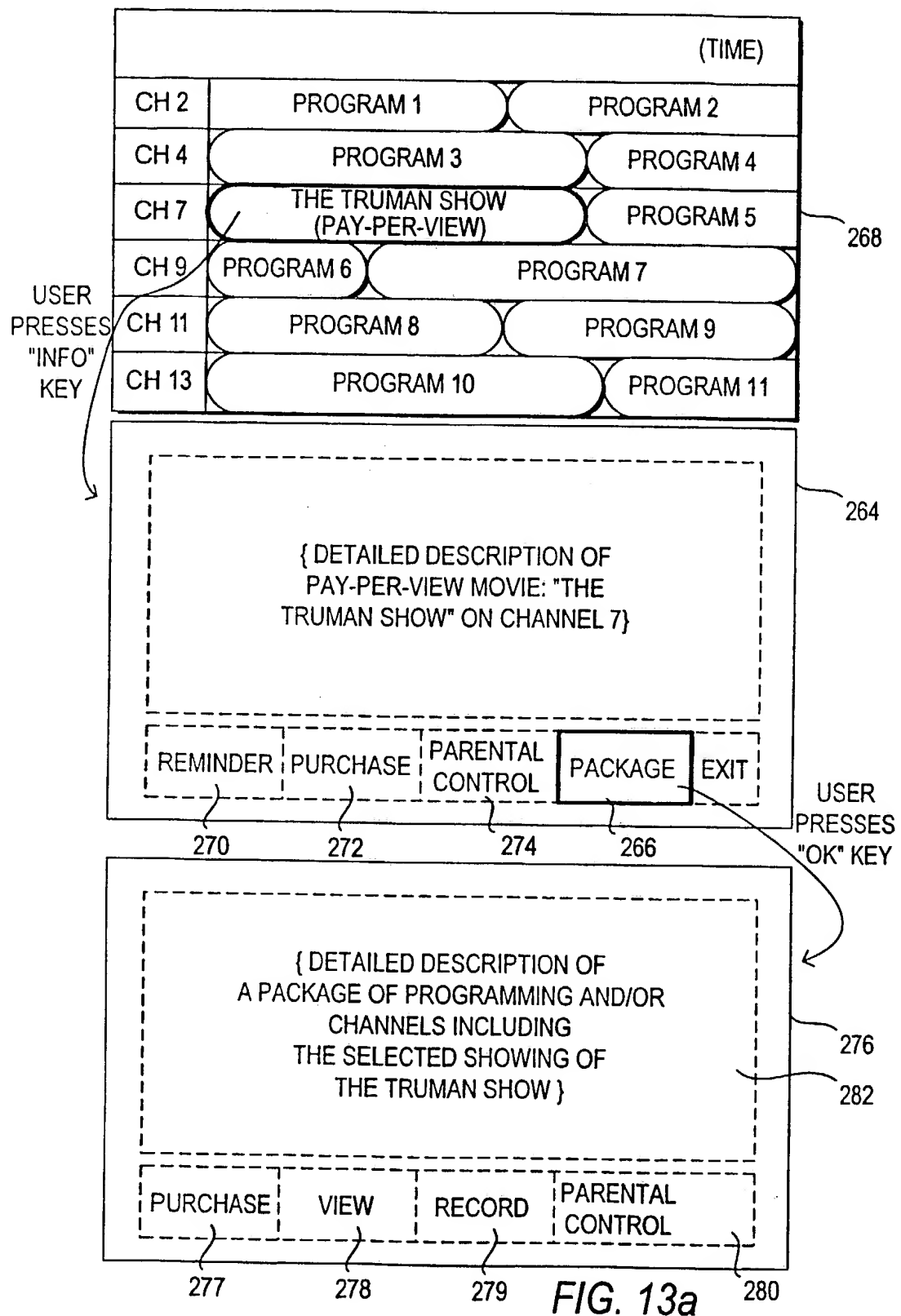
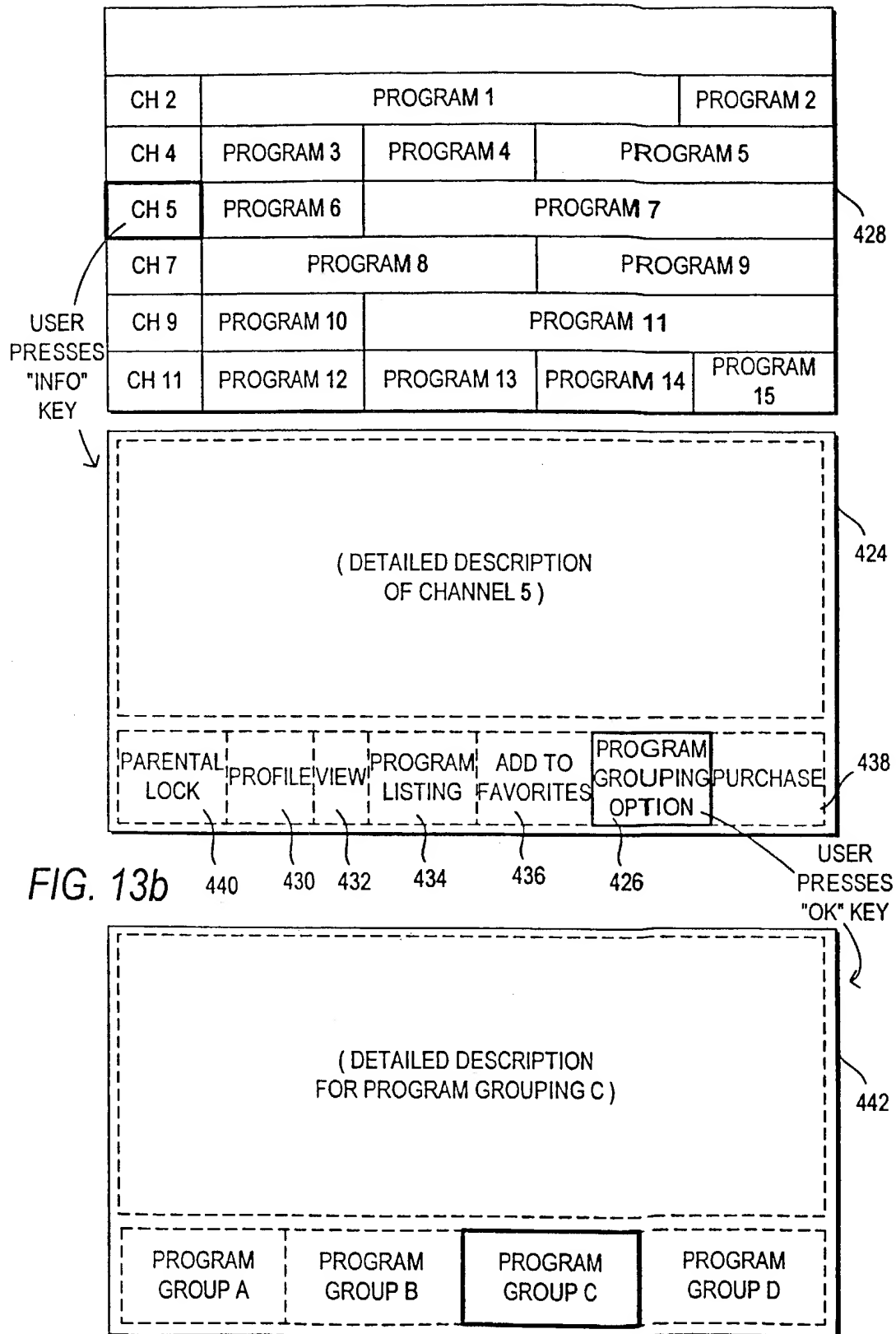


FIG. 13a



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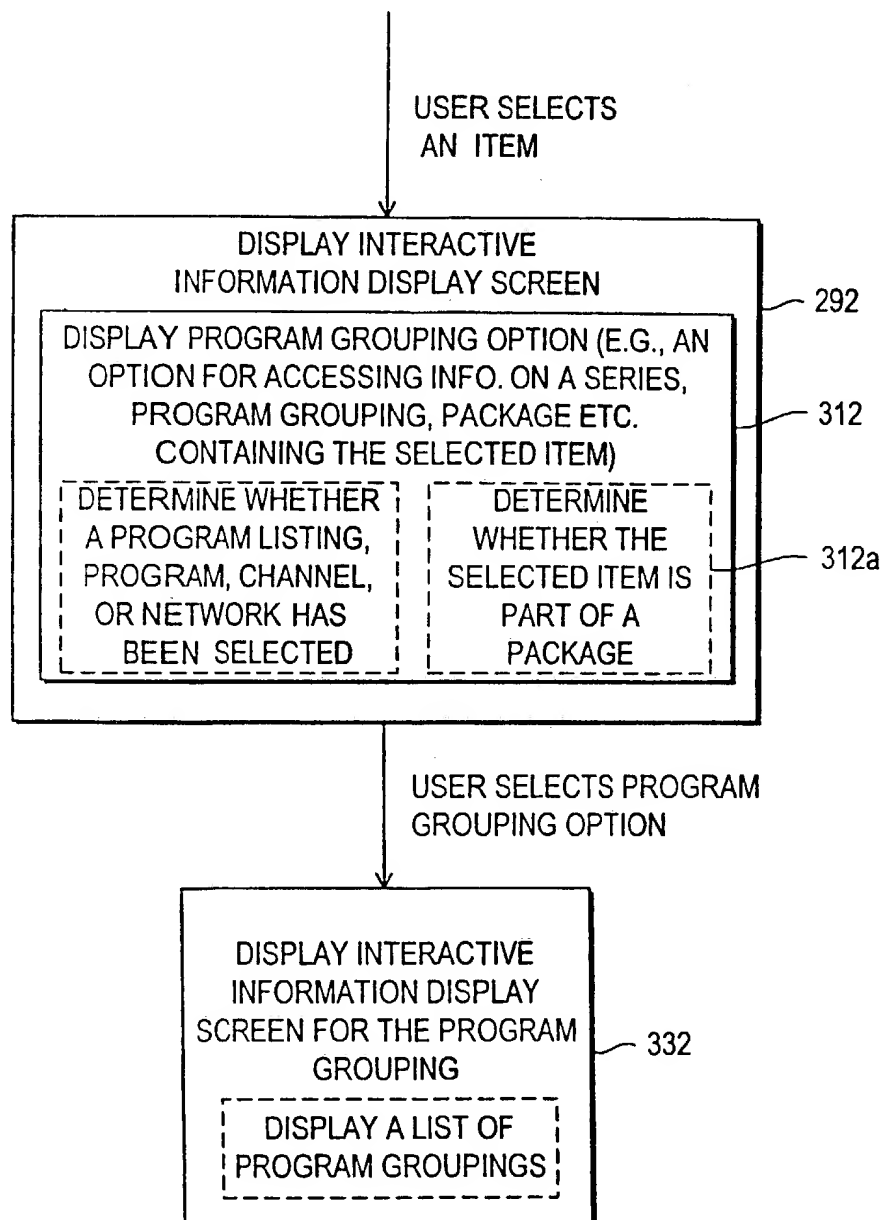


FIG. 13c



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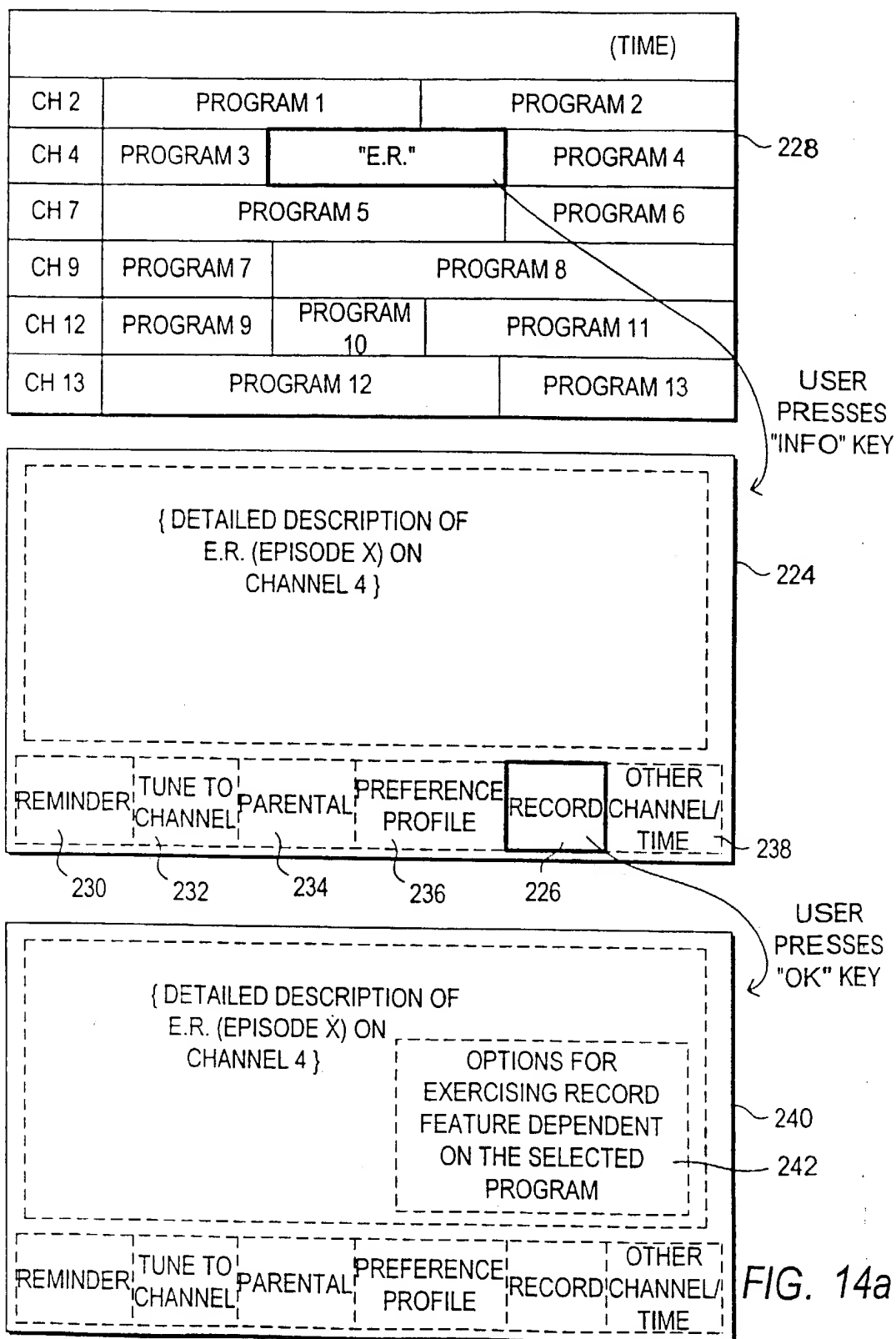


FIG. 14a

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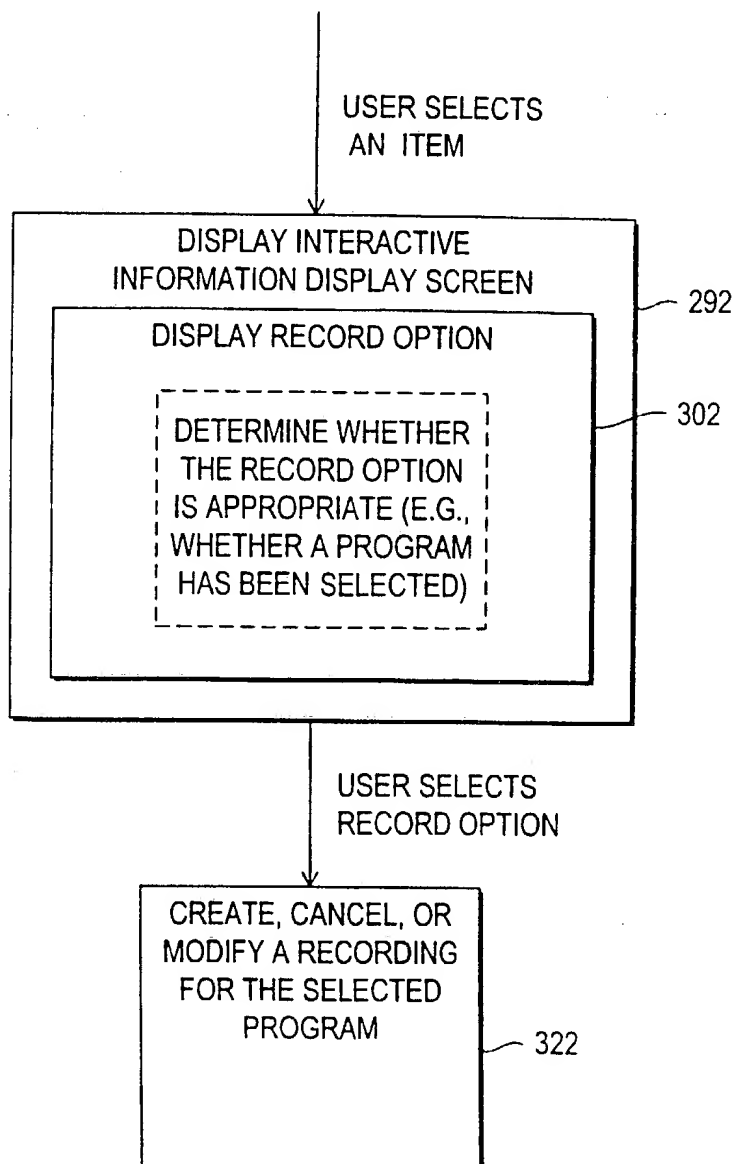


FIG. 14b

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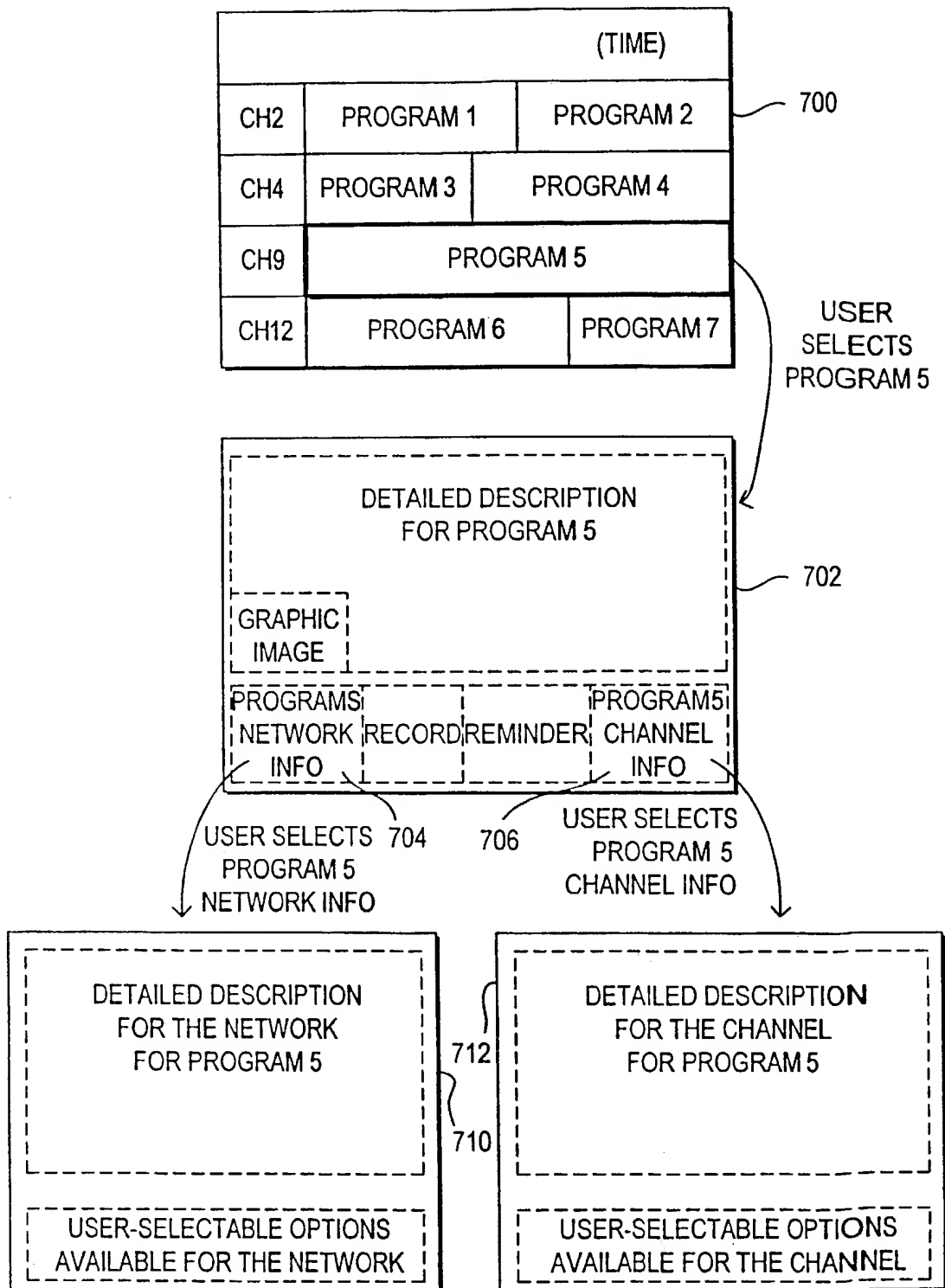


FIG. 15a

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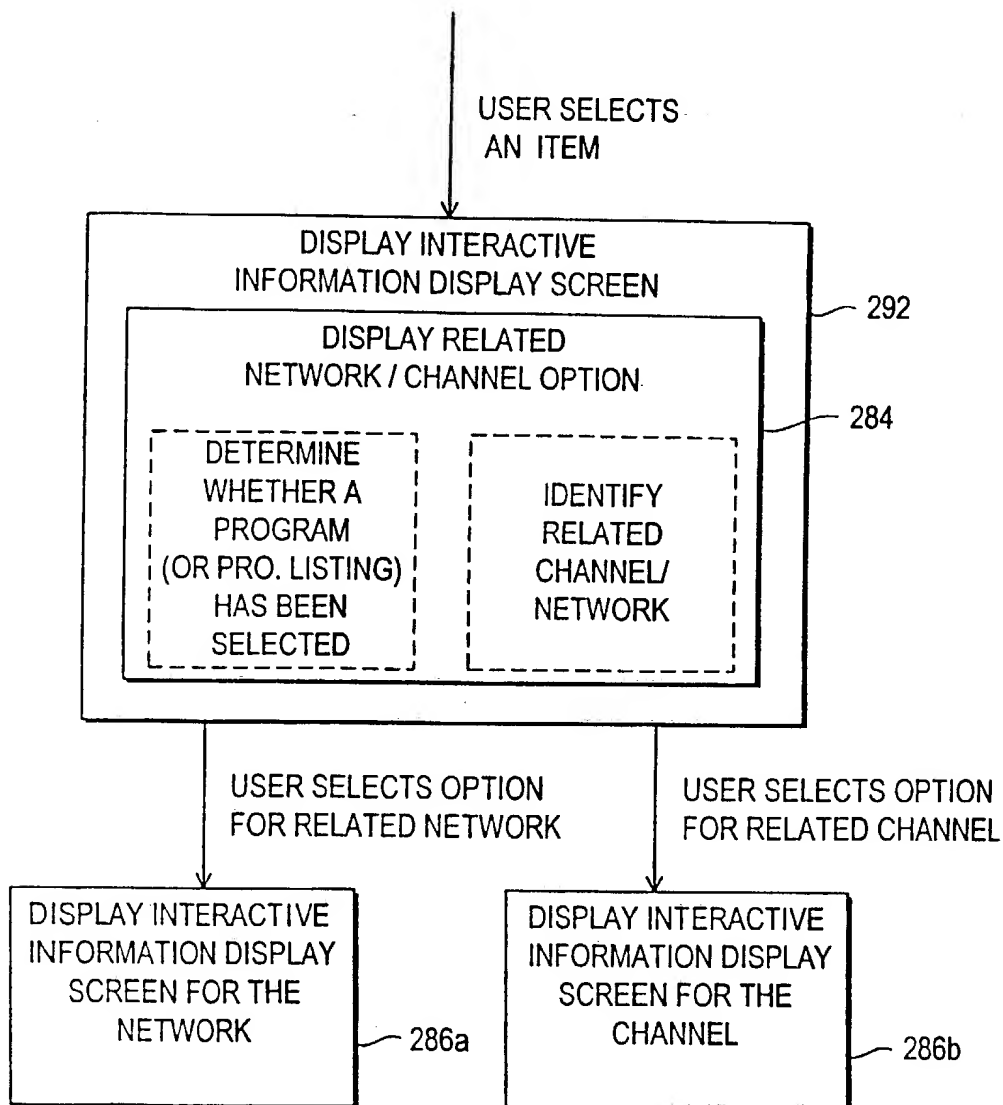


FIG. 15b

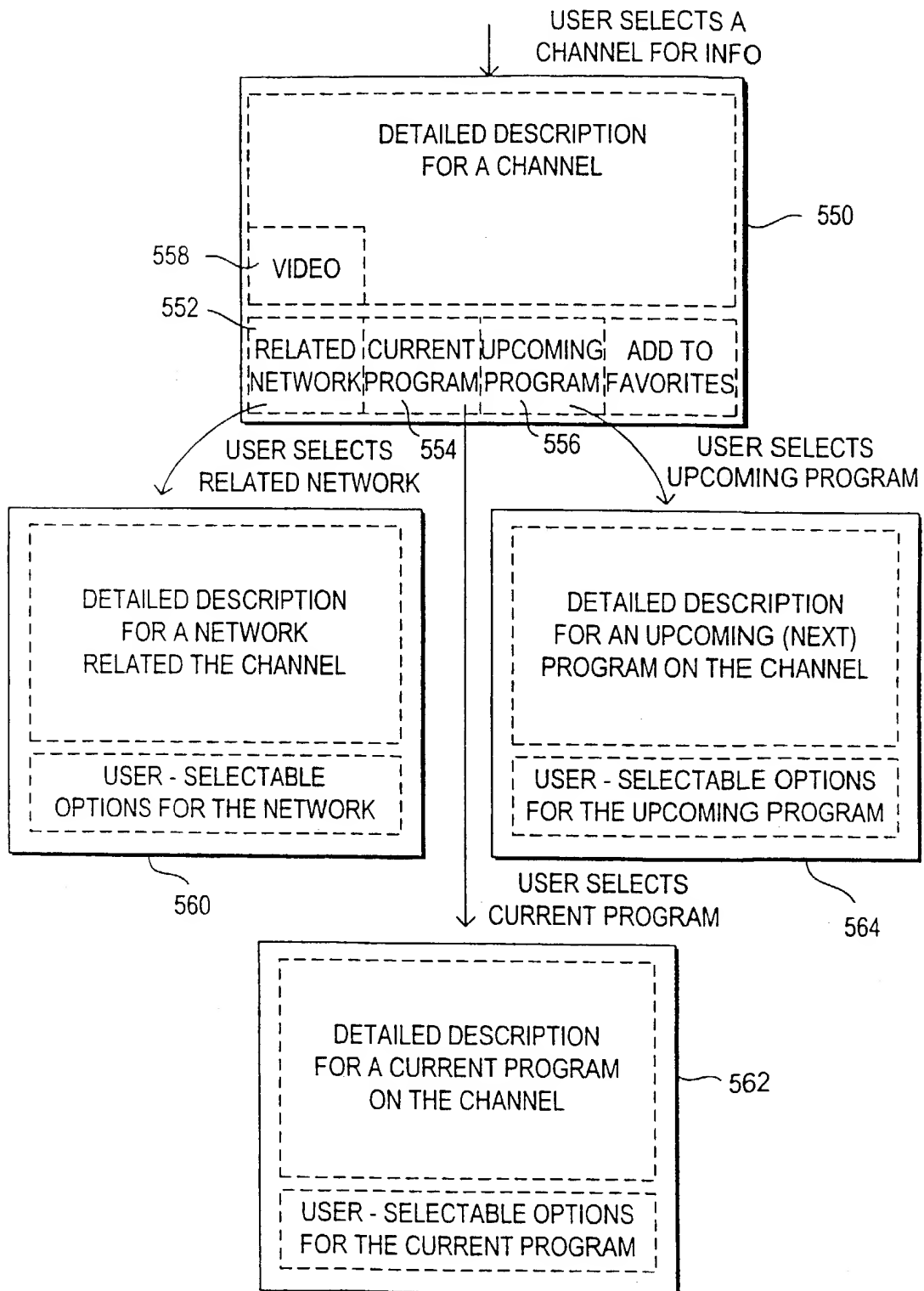


FIG. 16a

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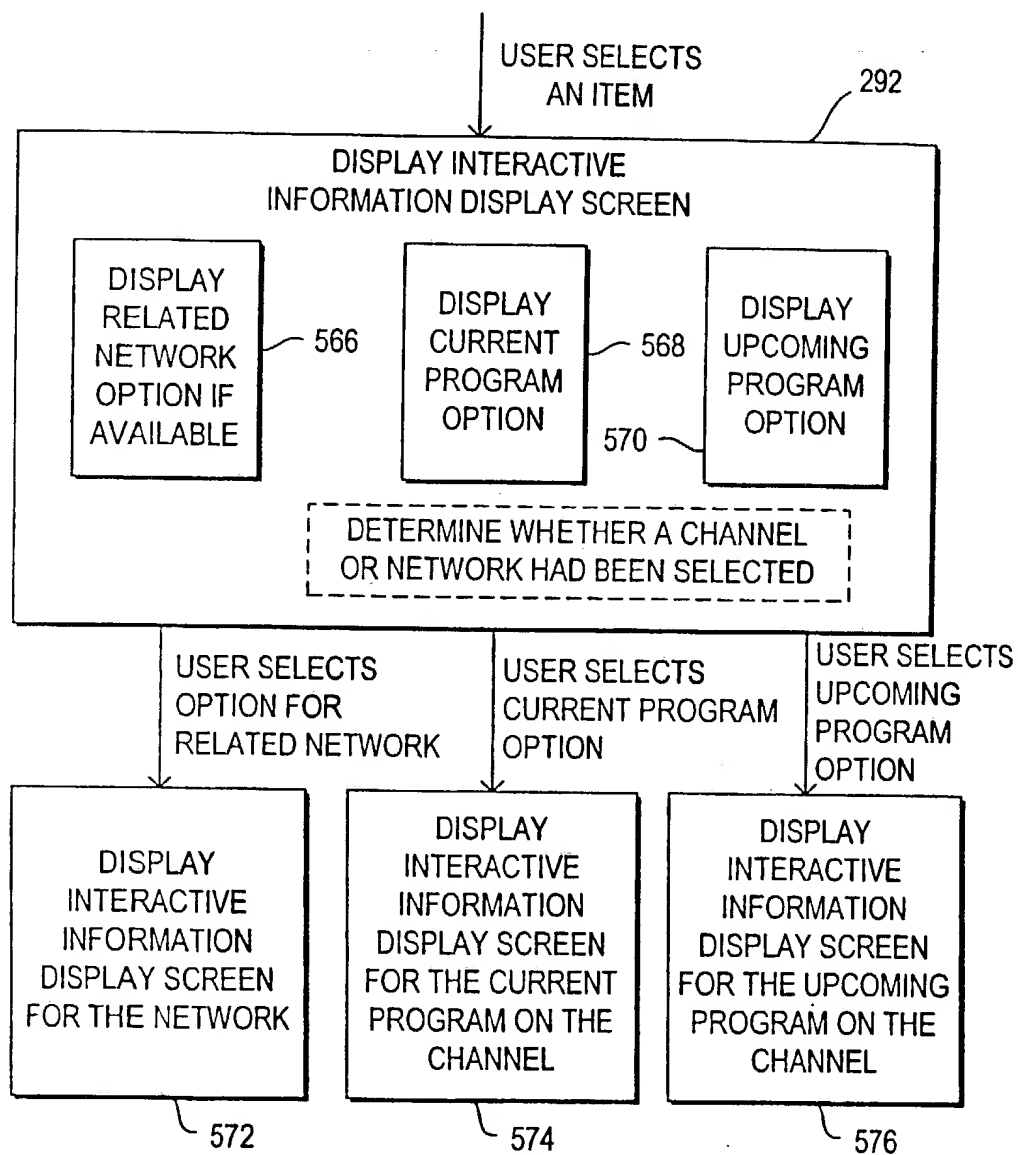


FIG. 16b

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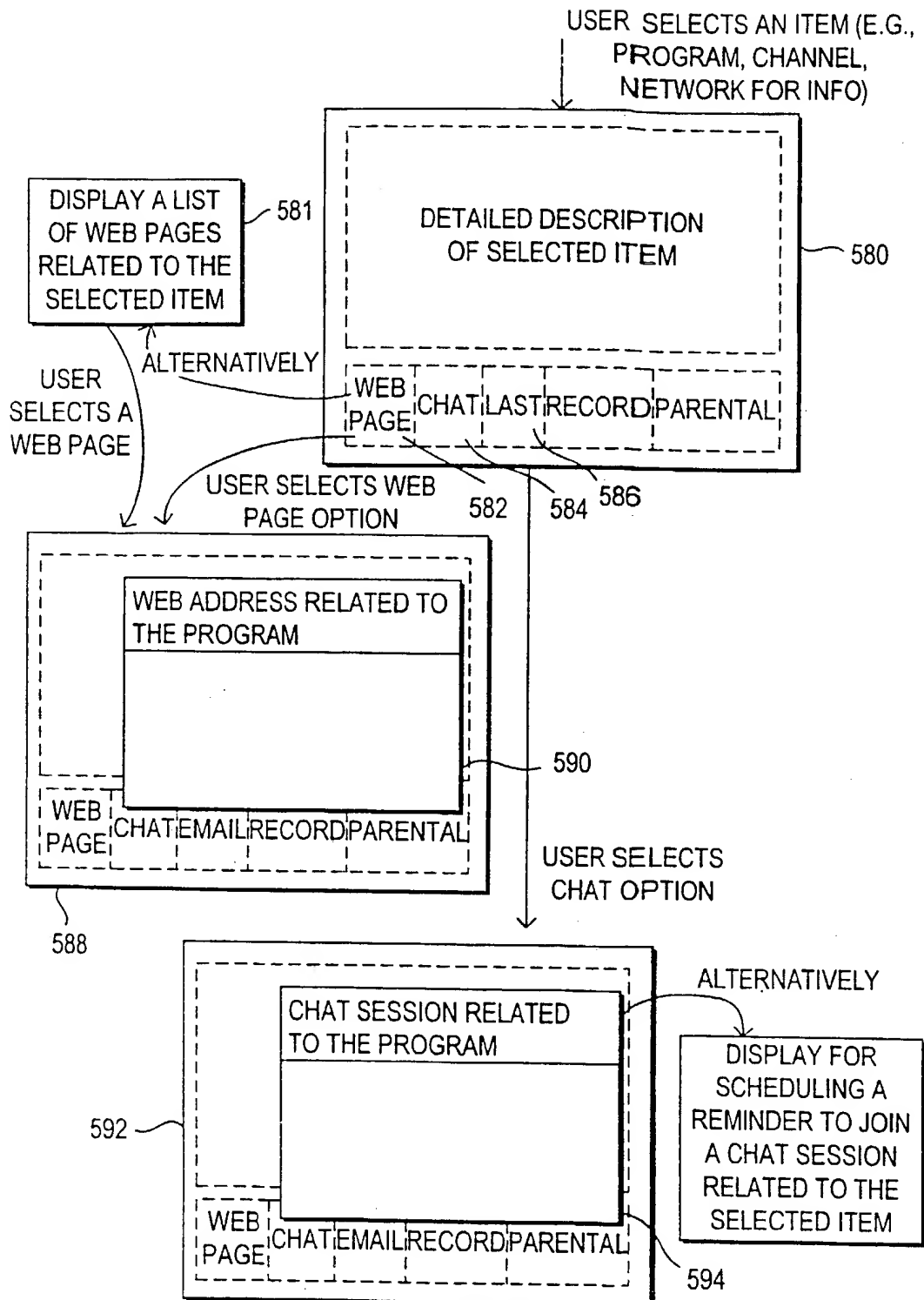


FIG. 17a

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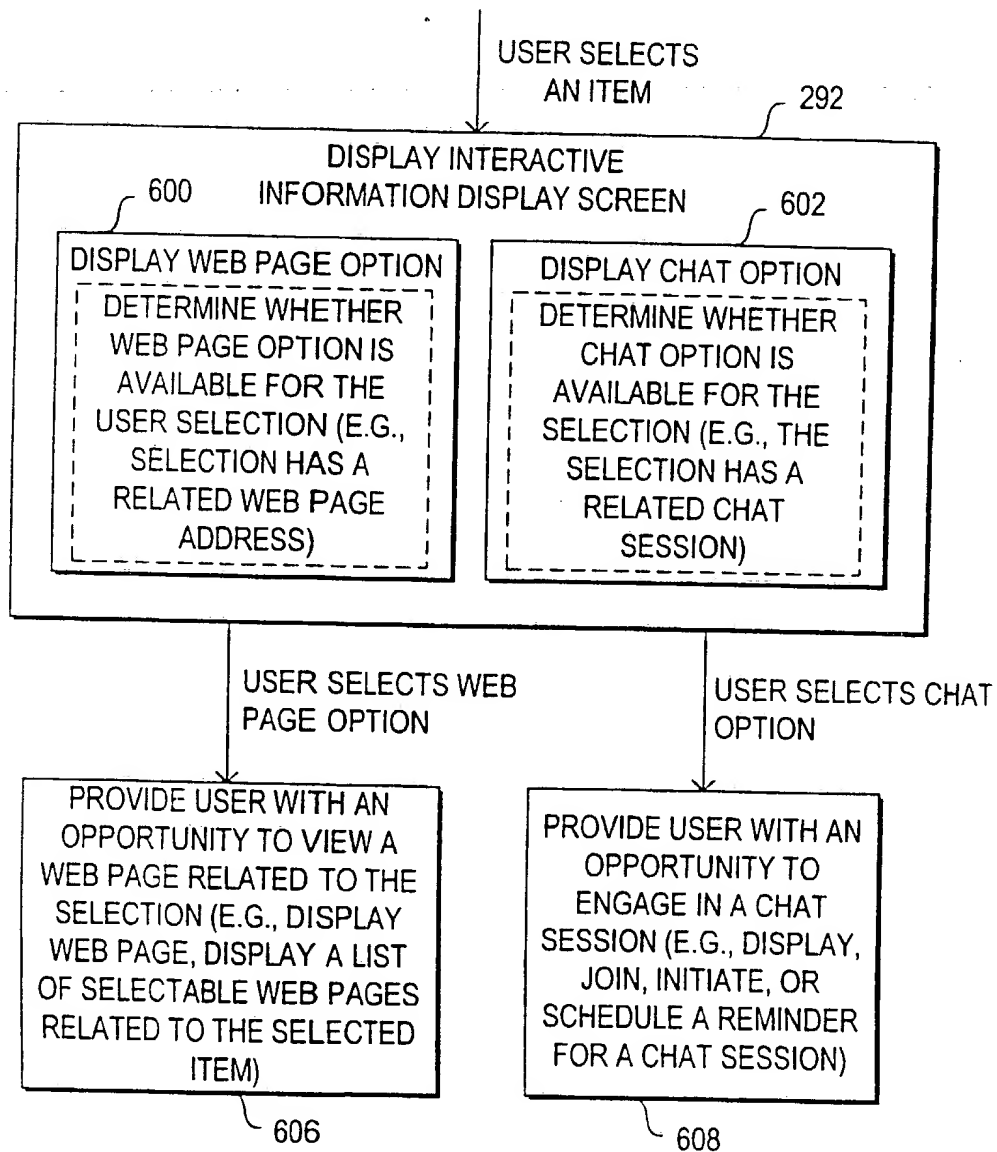


FIG. 17b



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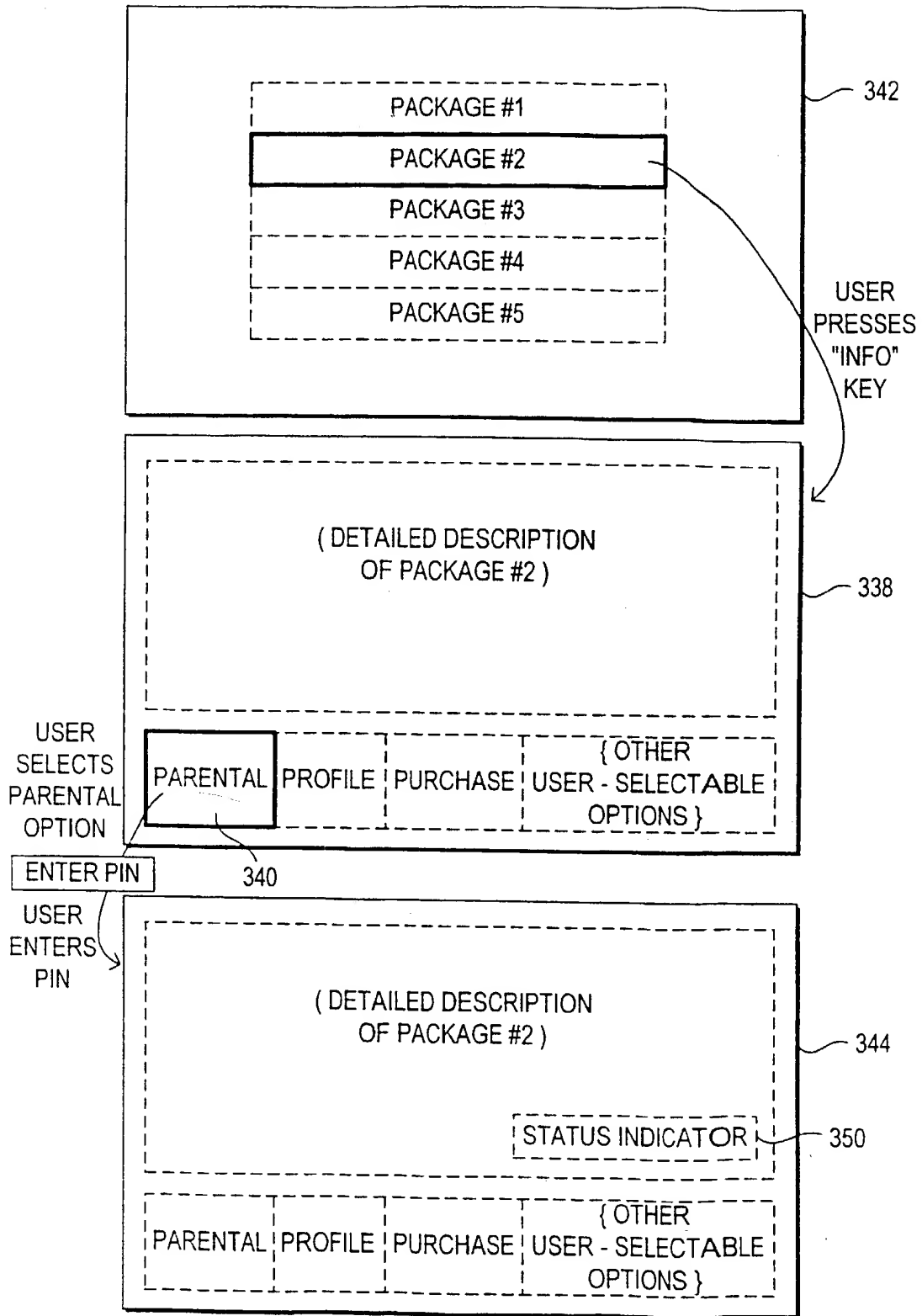


FIG. 18a

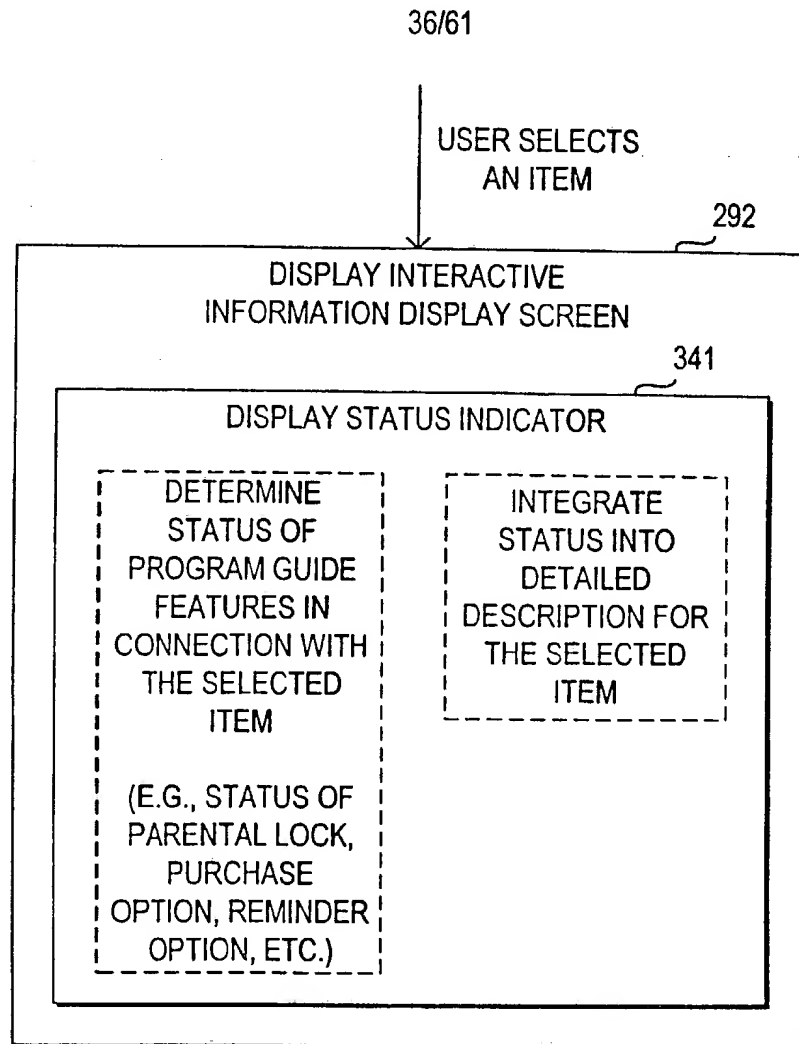


FIG. 18b

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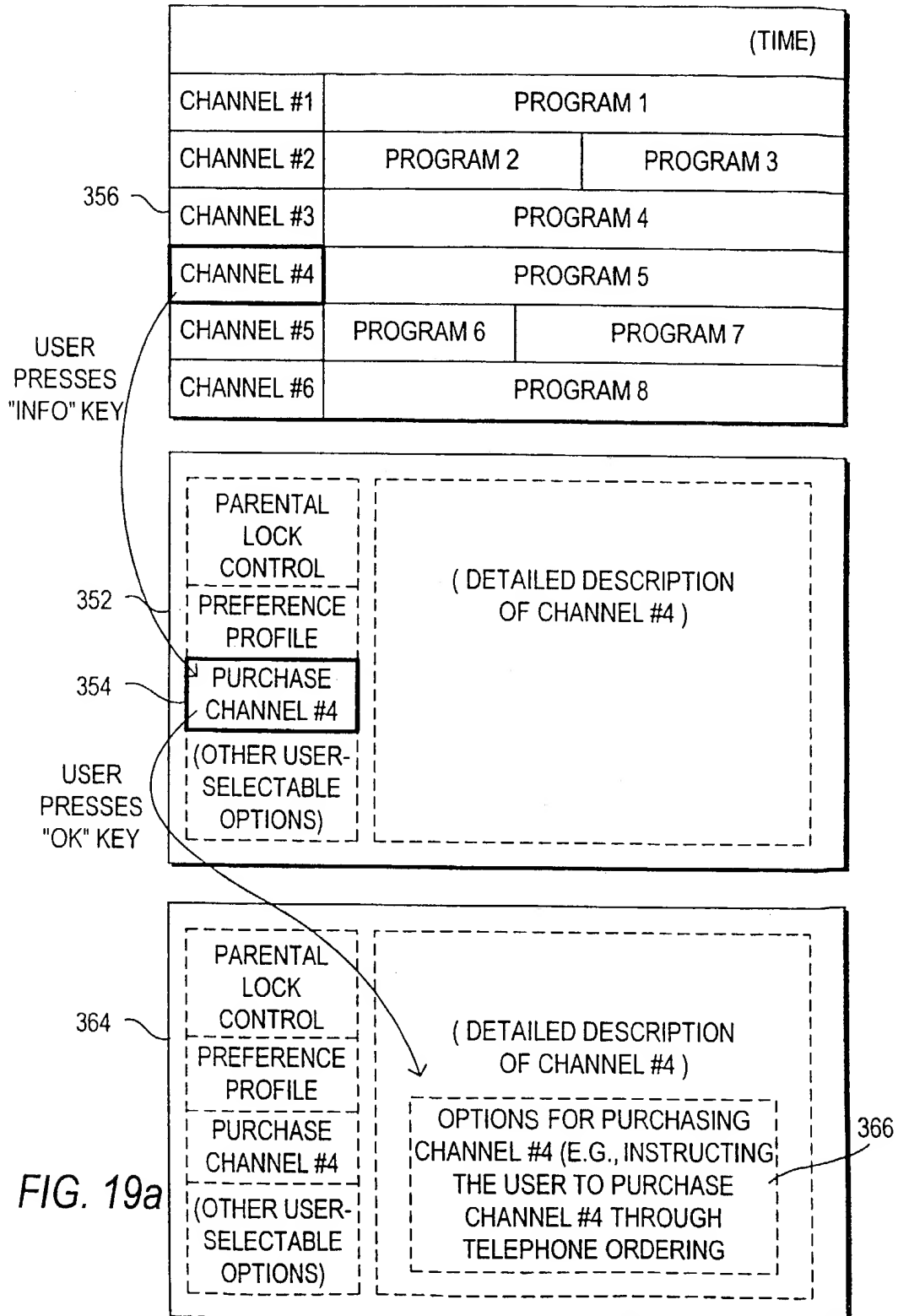


FIG. 19a

SUBSTITUTE SHEET (RULE 26)

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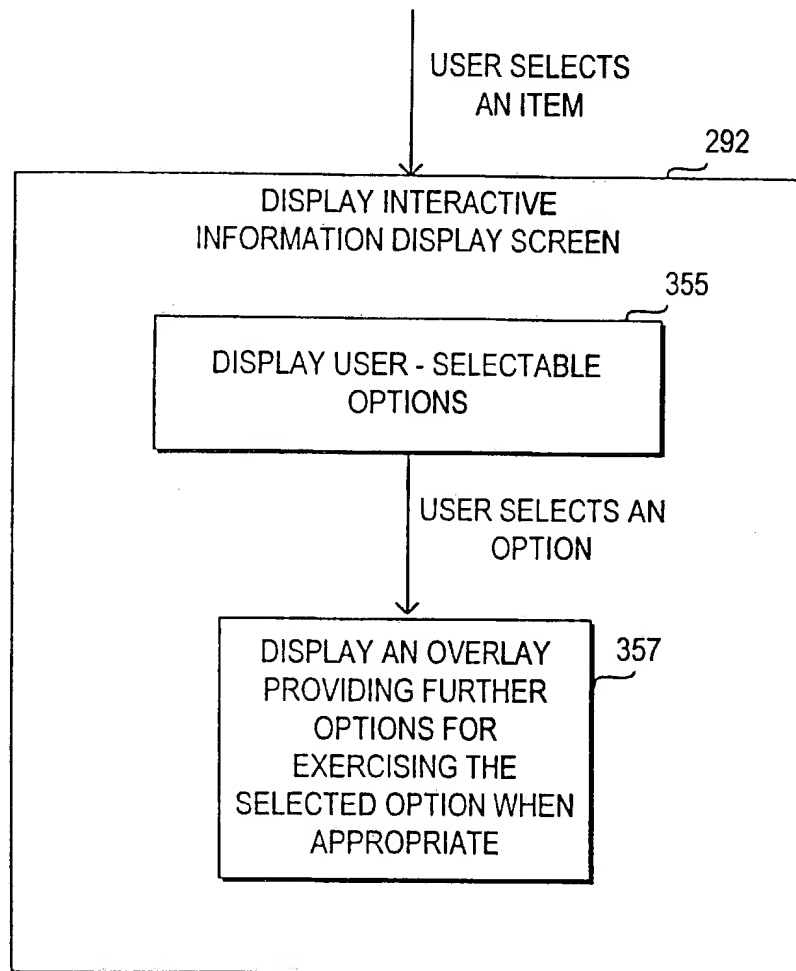


FIG. 19b

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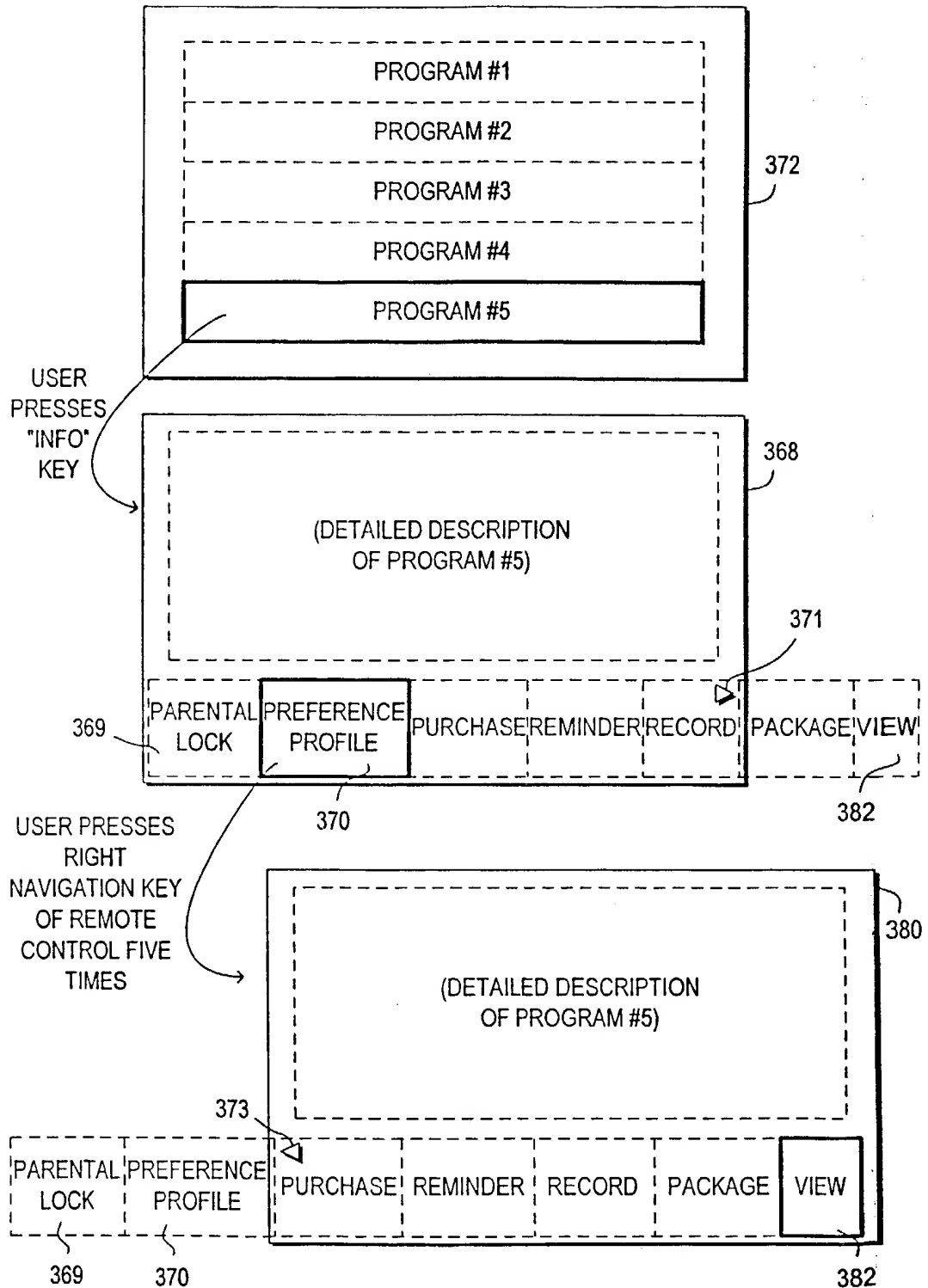


FIG. 20a

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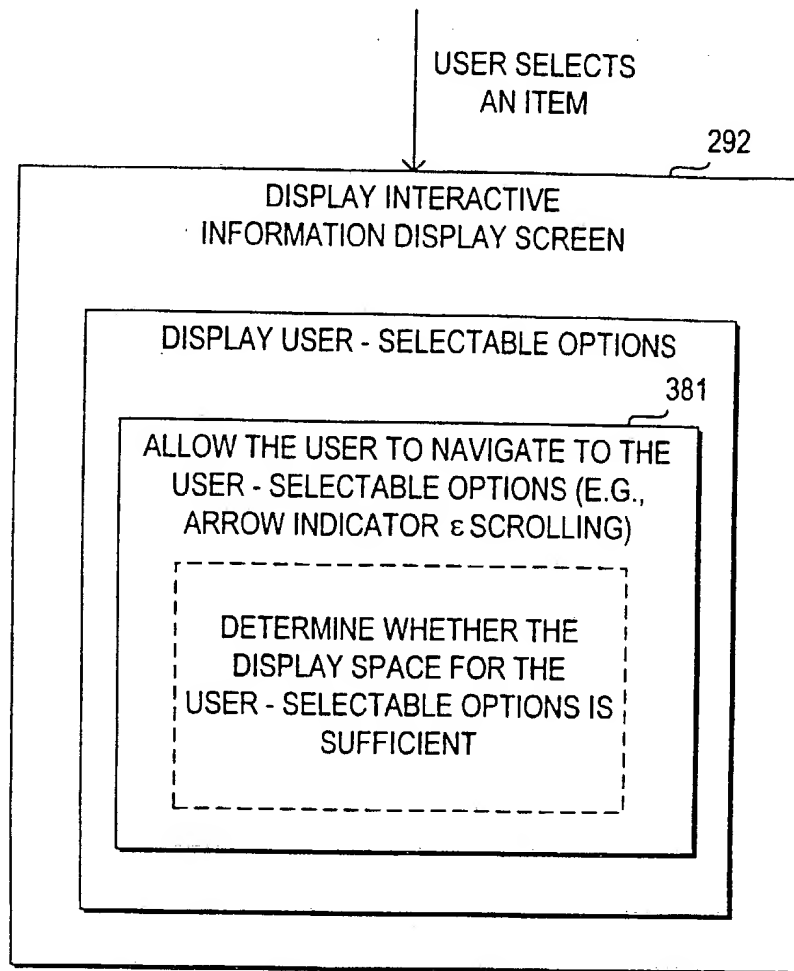
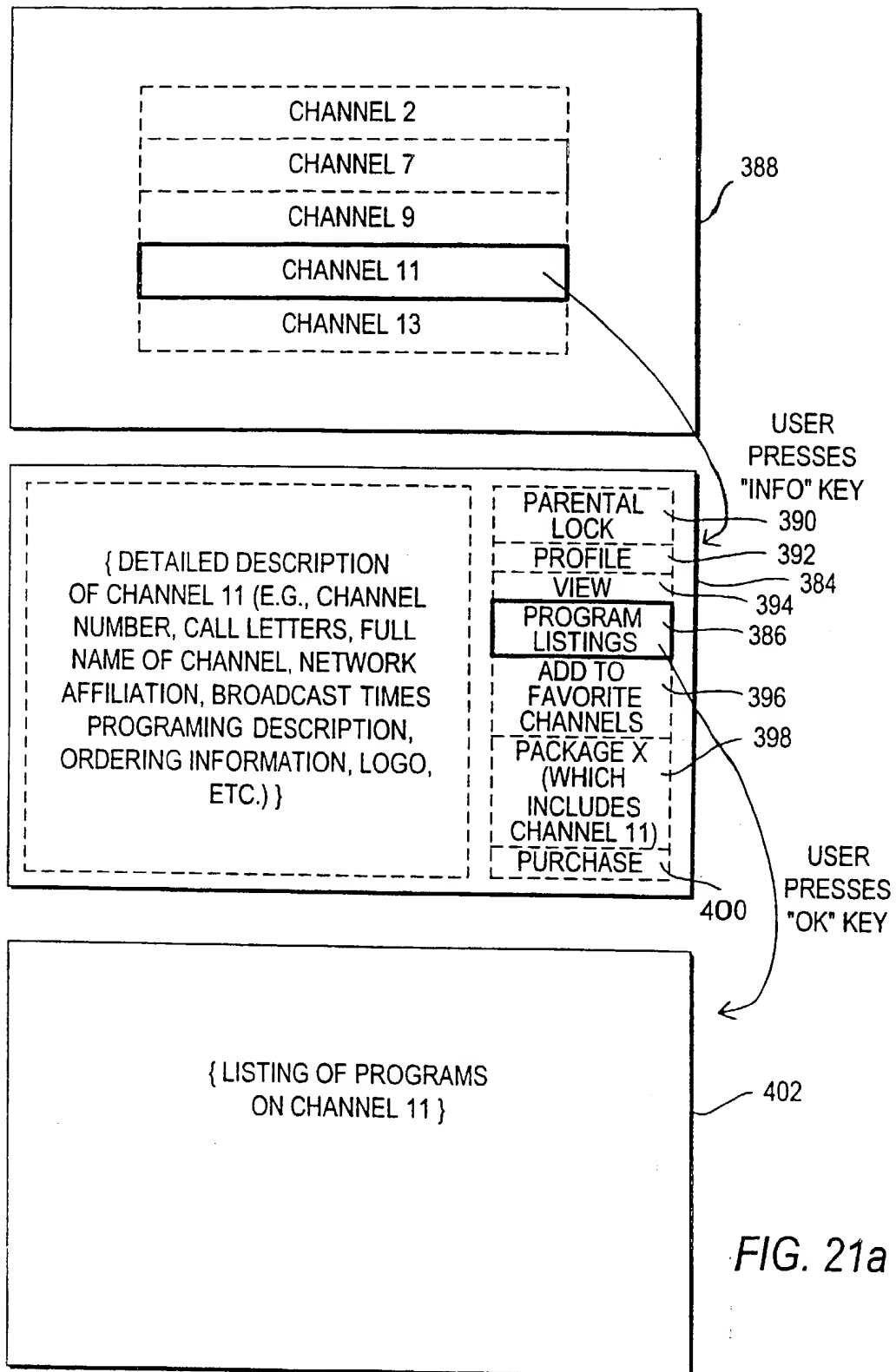


FIG. 20b



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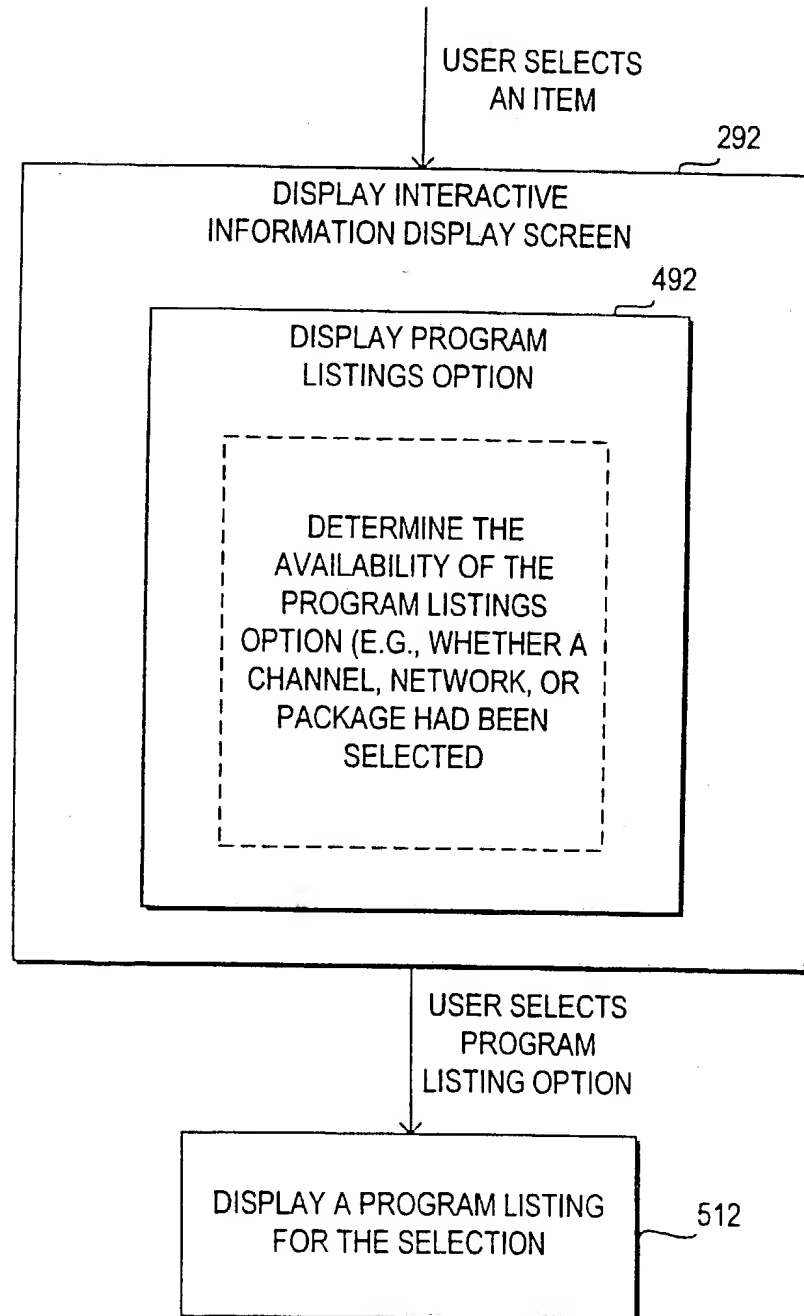


FIG. 21b



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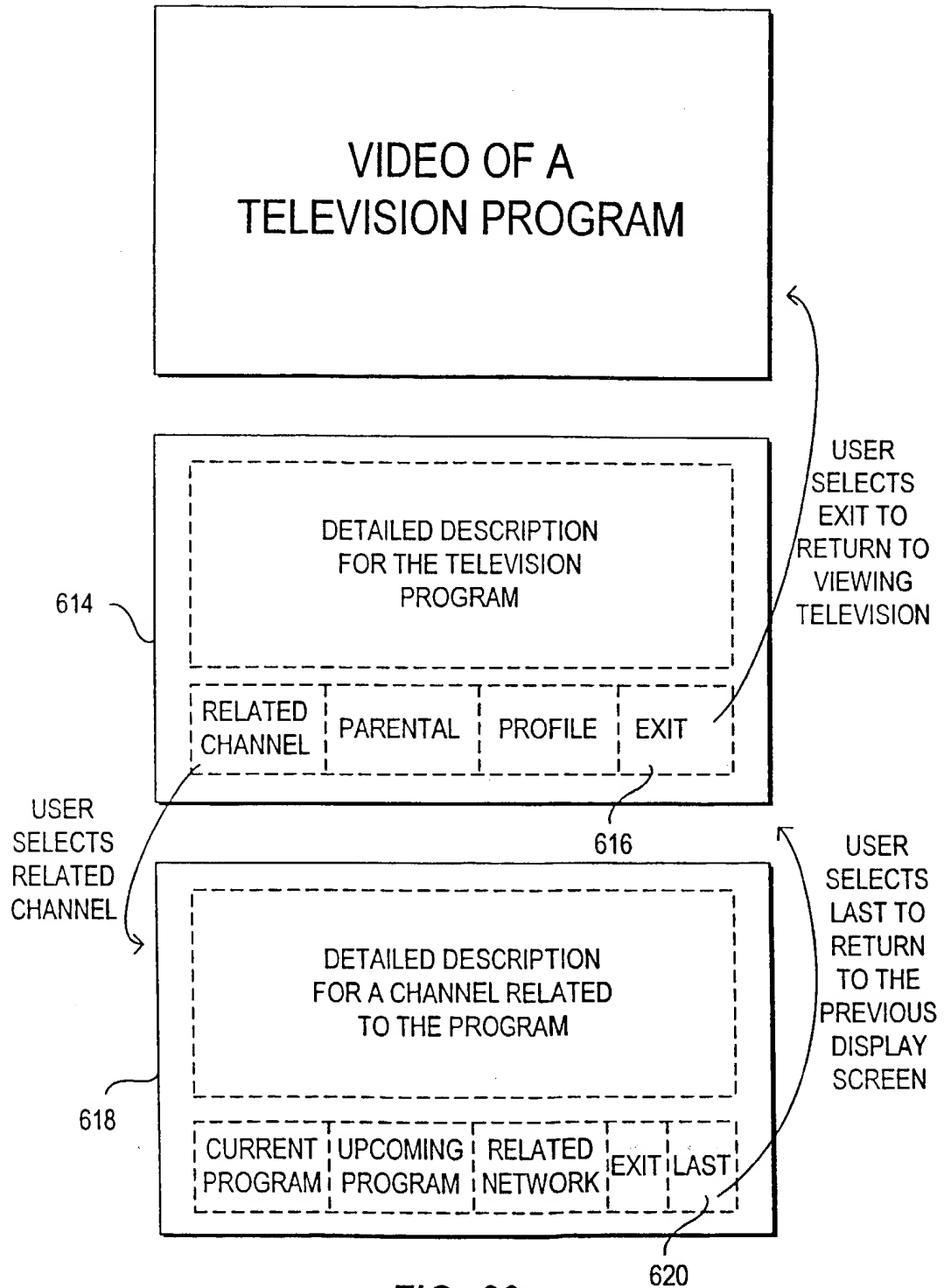


FIG. 22a

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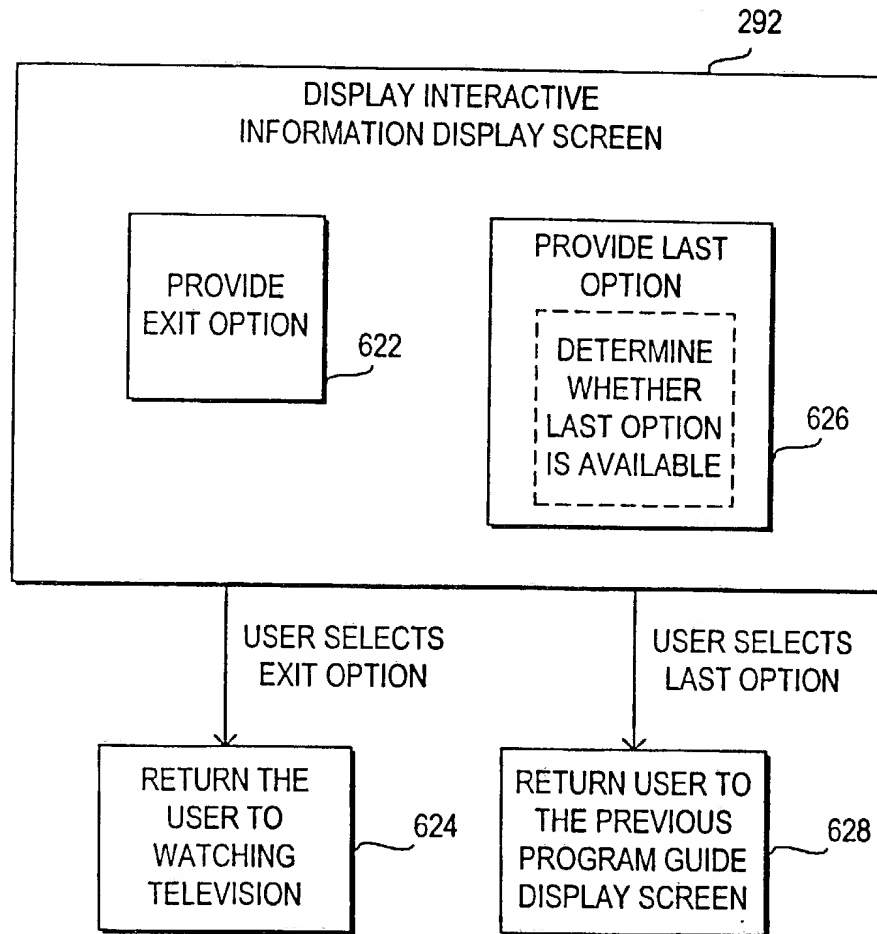


FIG. 22b

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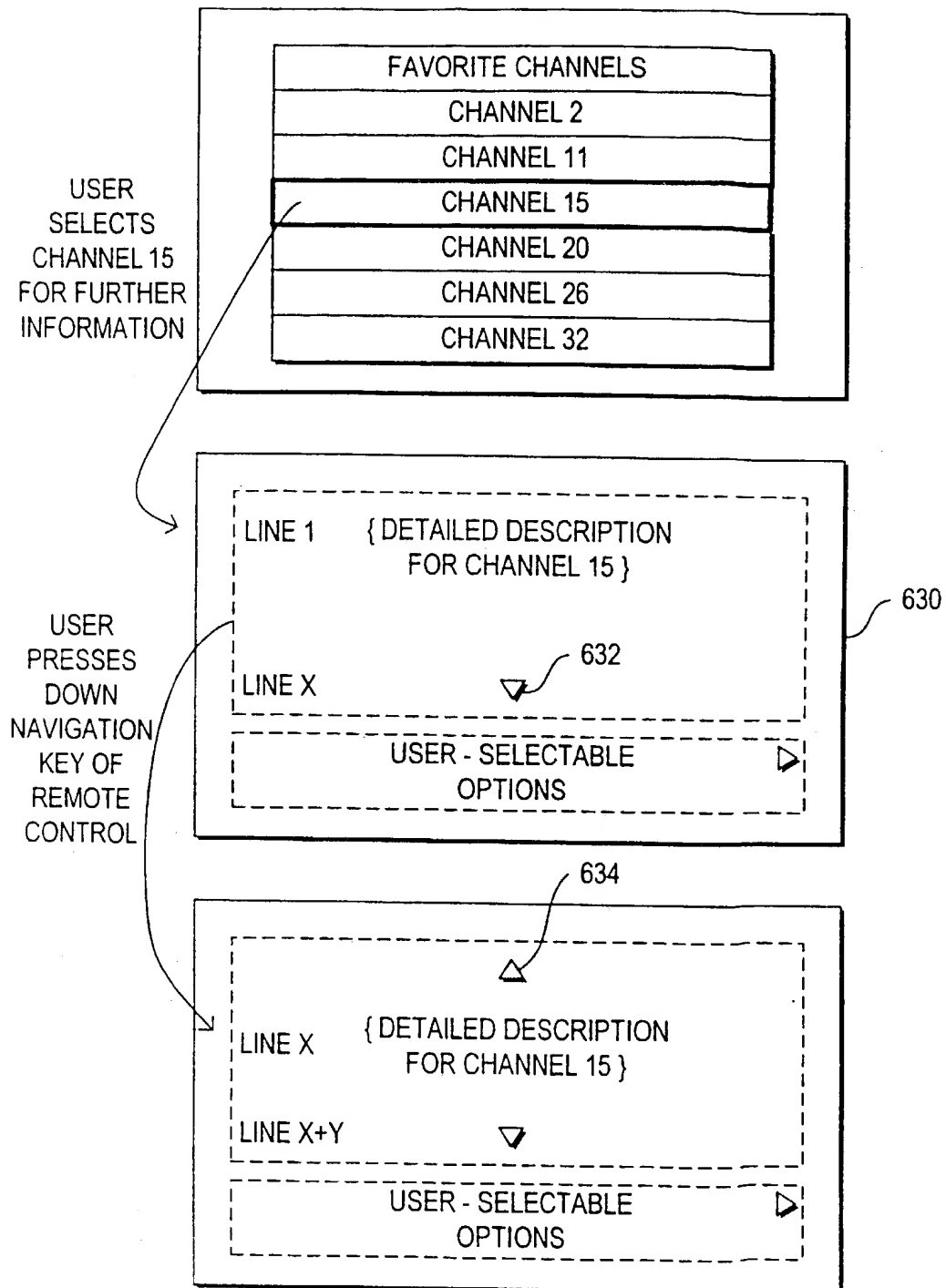


FIG. 23a

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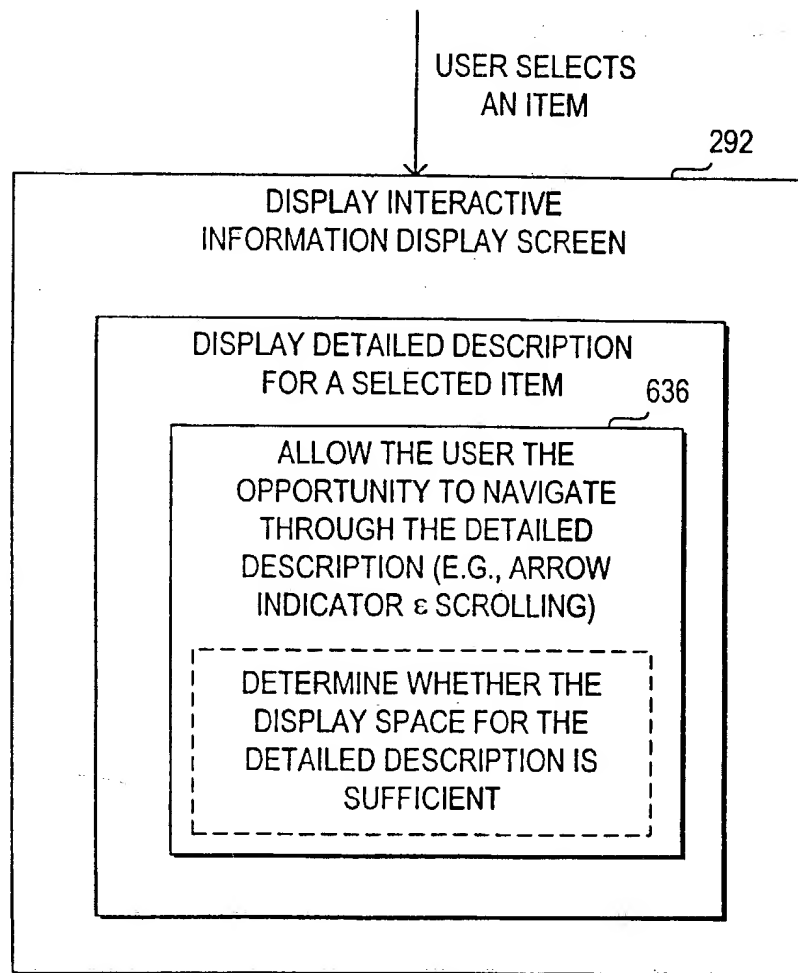
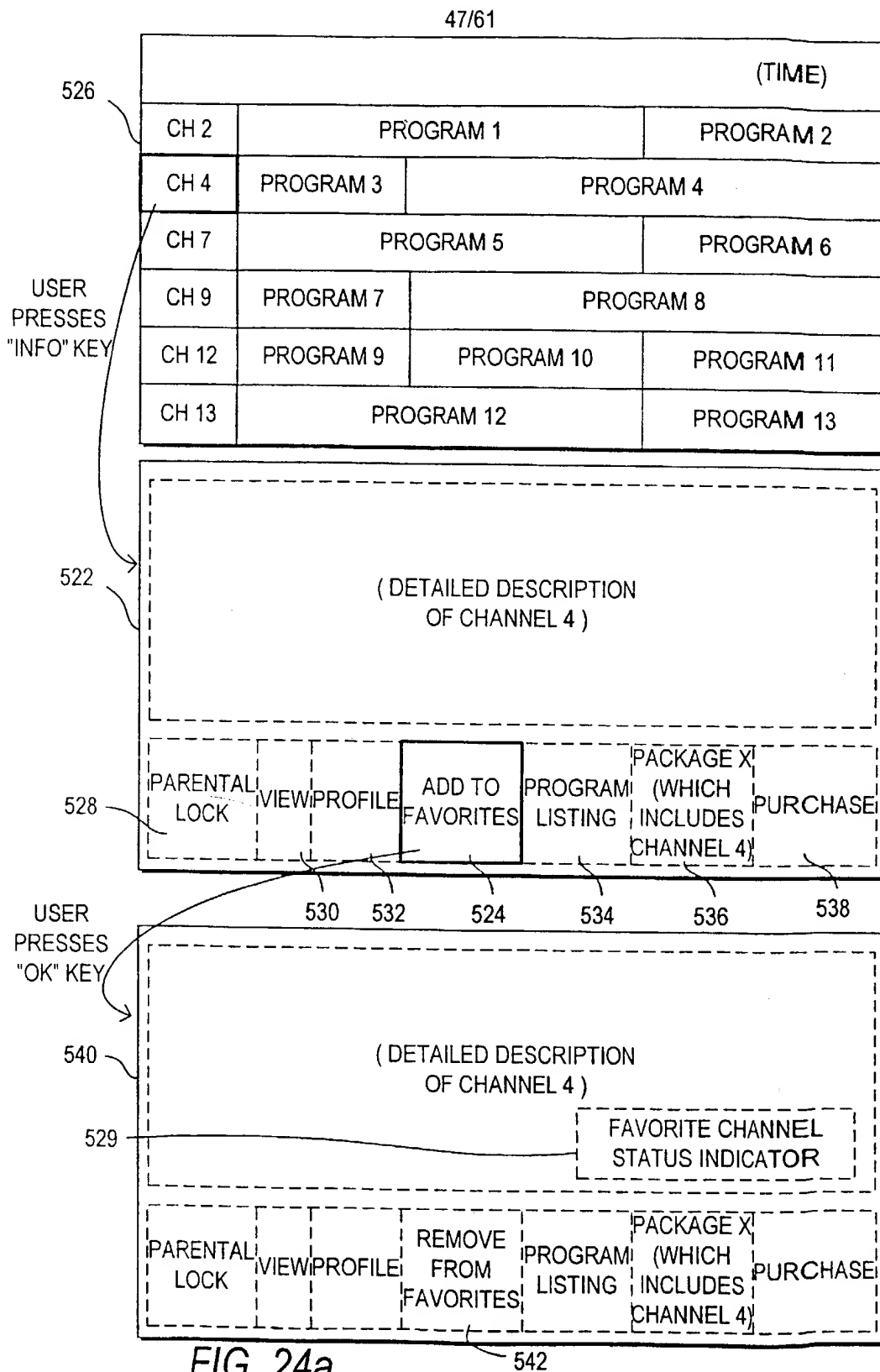


FIG. 23b



SUBSTITUTE SHEET (RULE 28)

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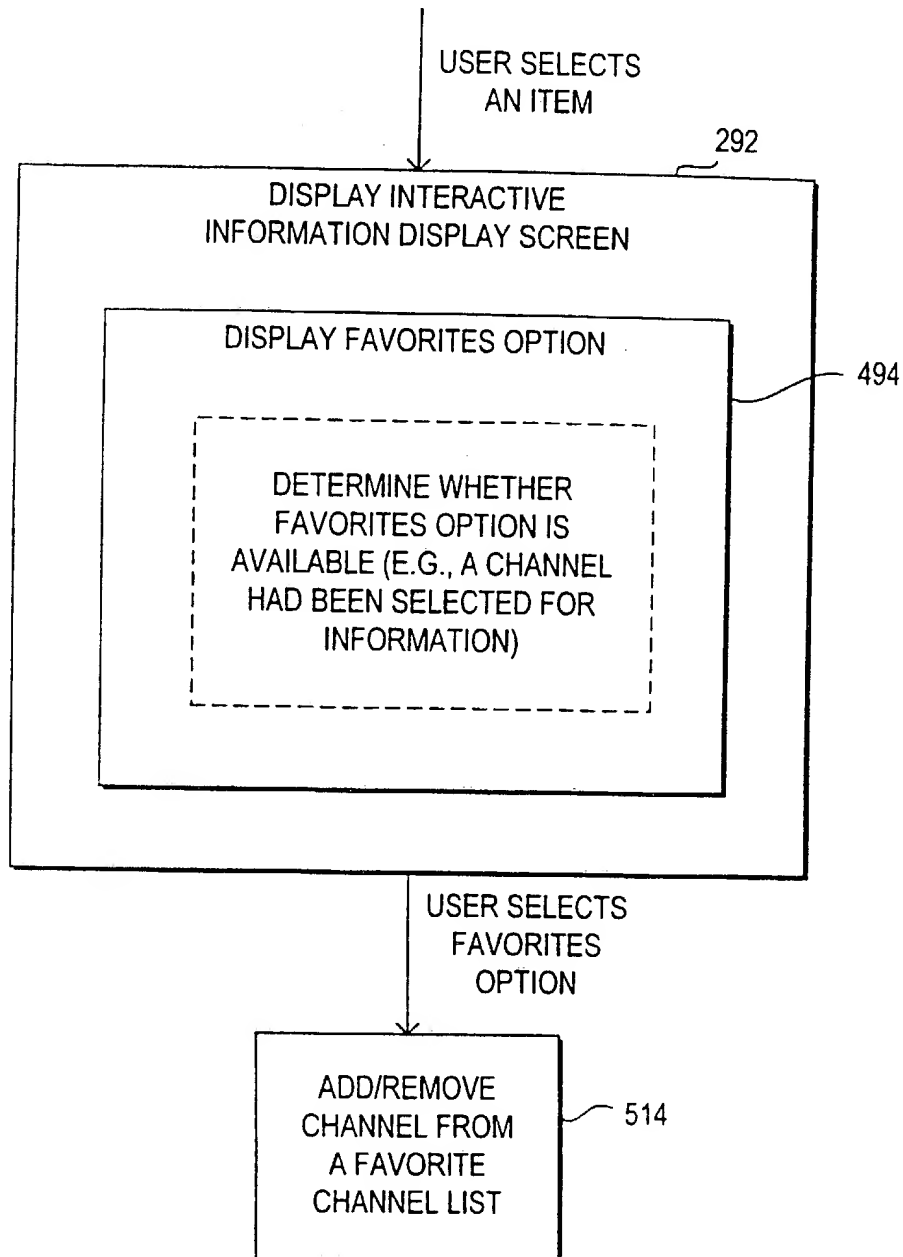
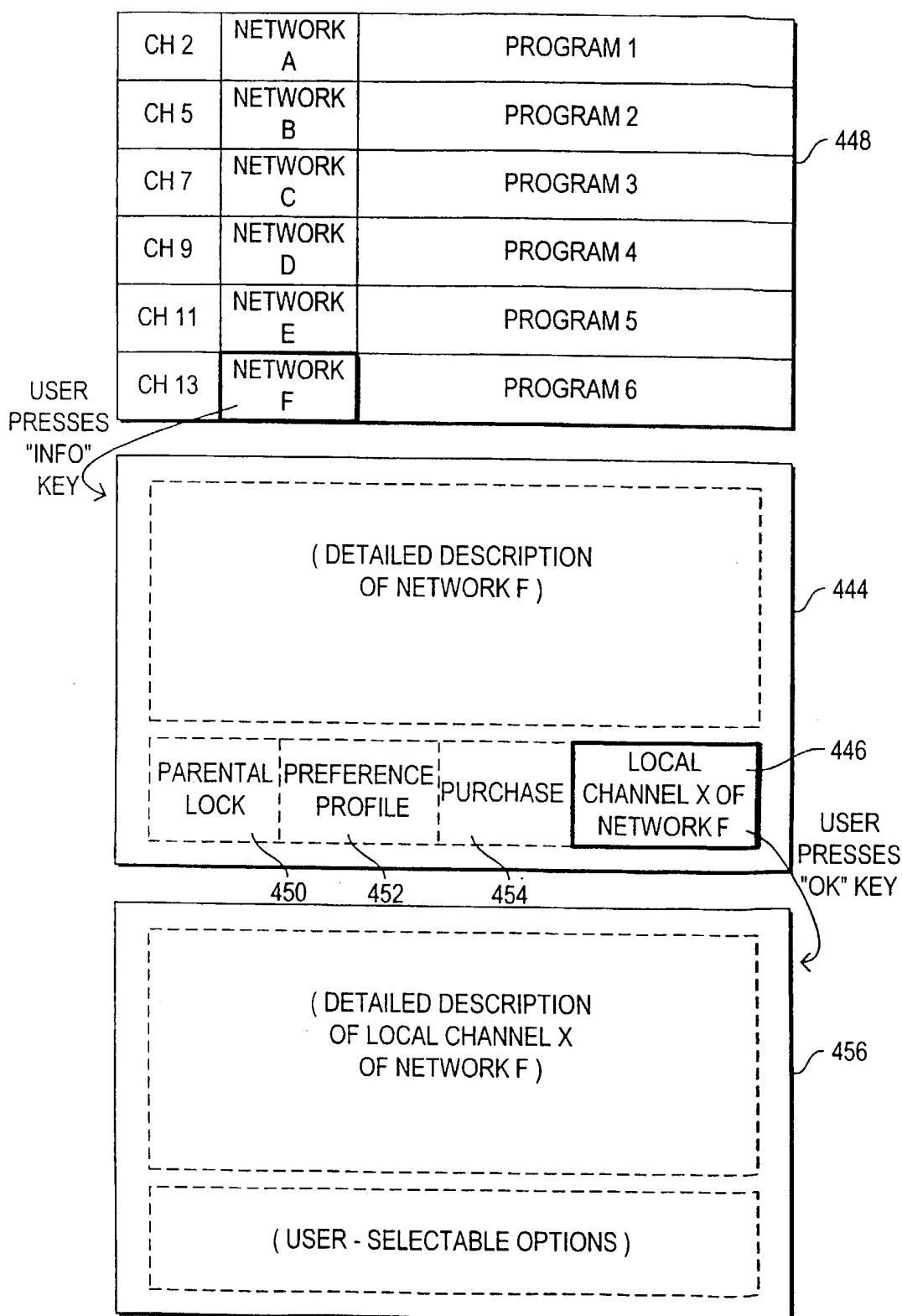


FIG. 24b

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**FIG. 25a**  
SUBSTITUTE SHEET (RULE 26)

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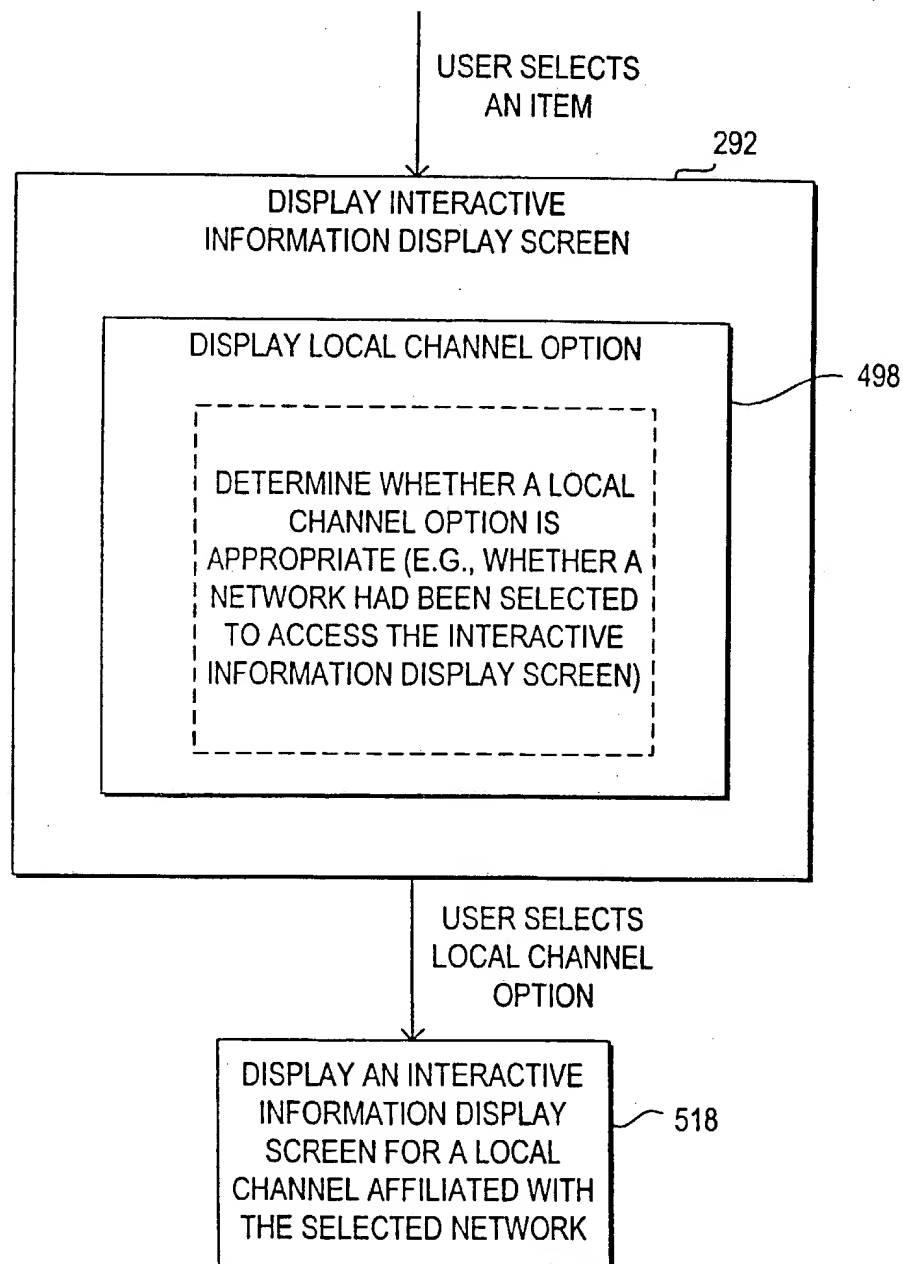


FIG. 25b



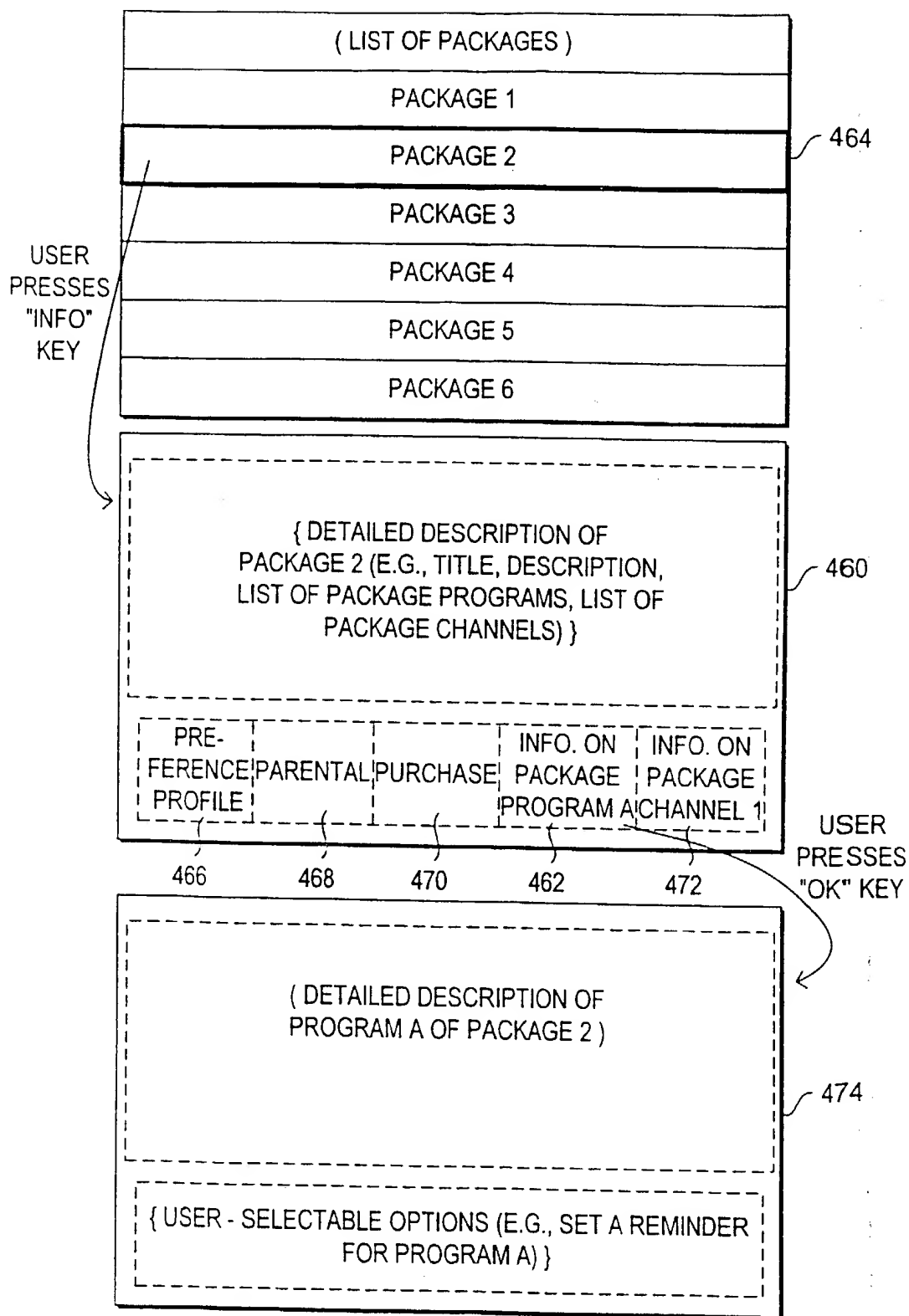


FIG. 26a

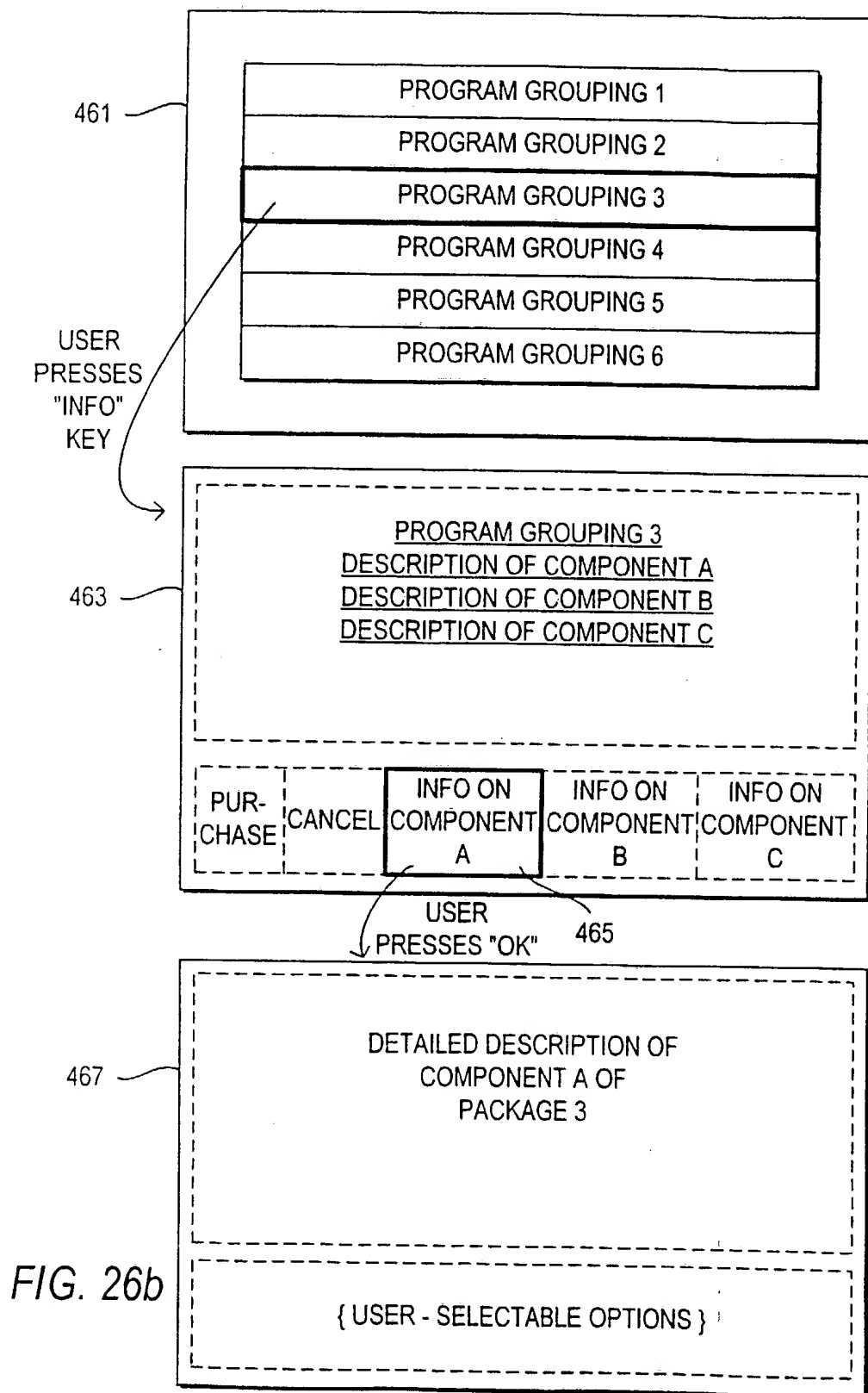


FIG. 26b

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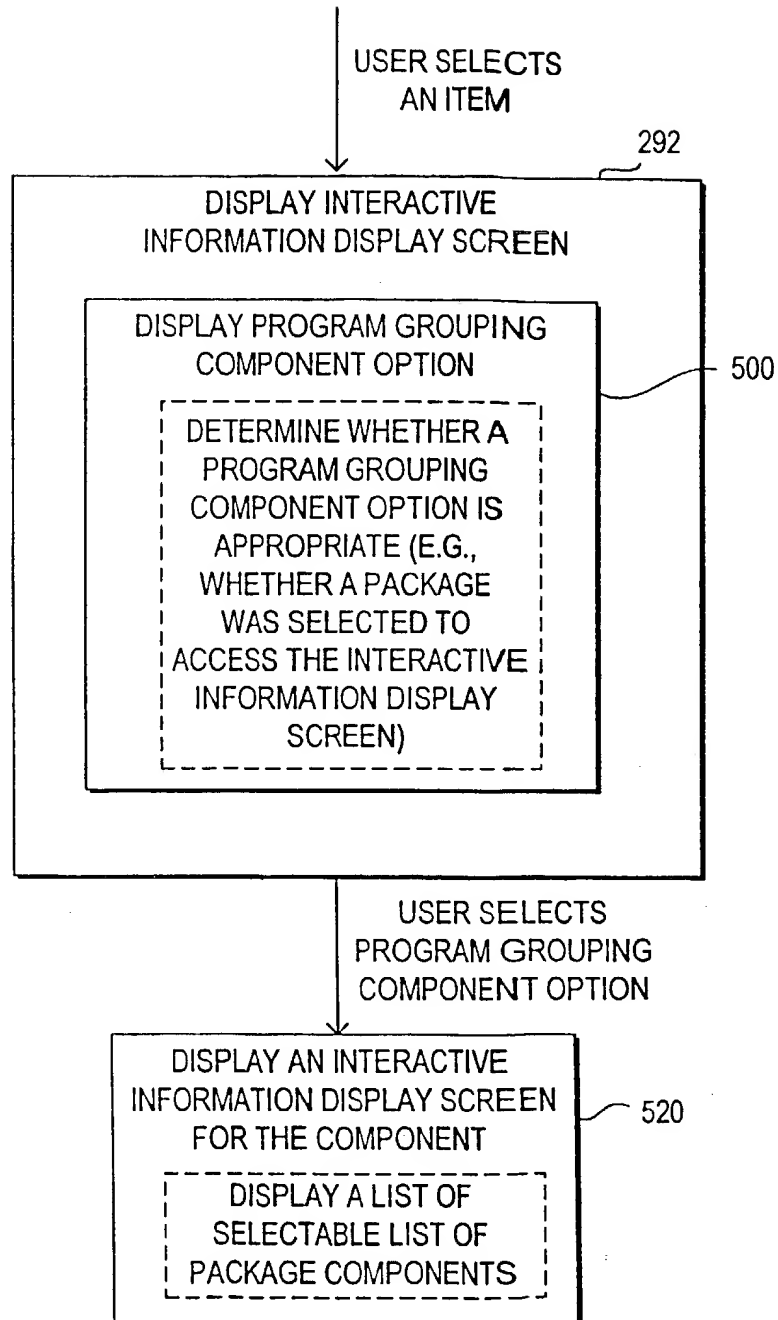


FIG. 26c

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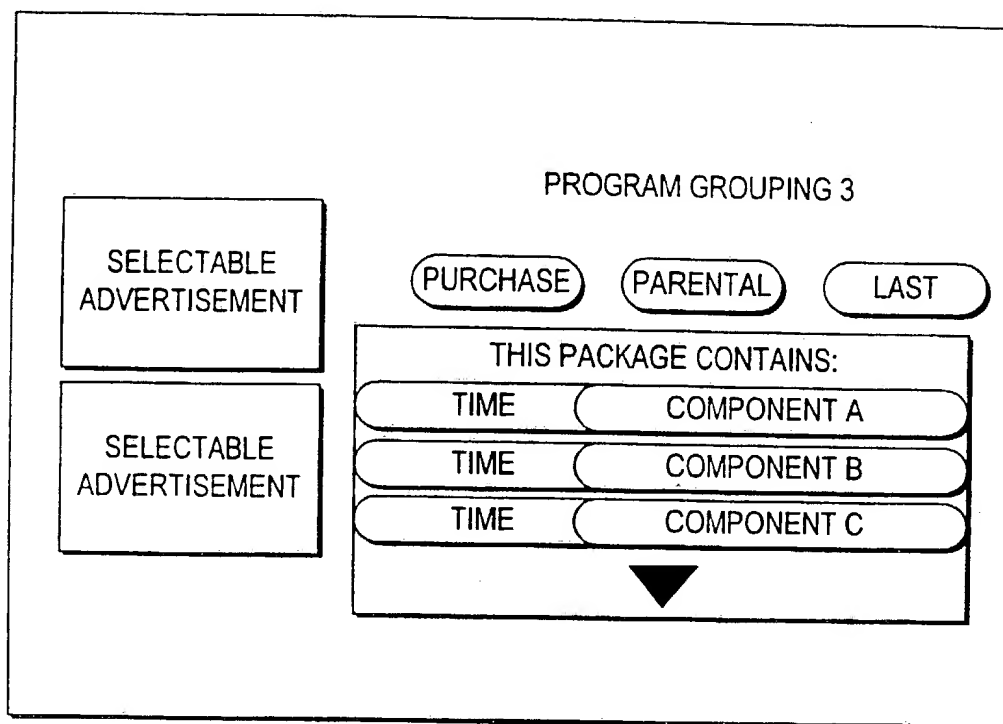


FIG. 26d

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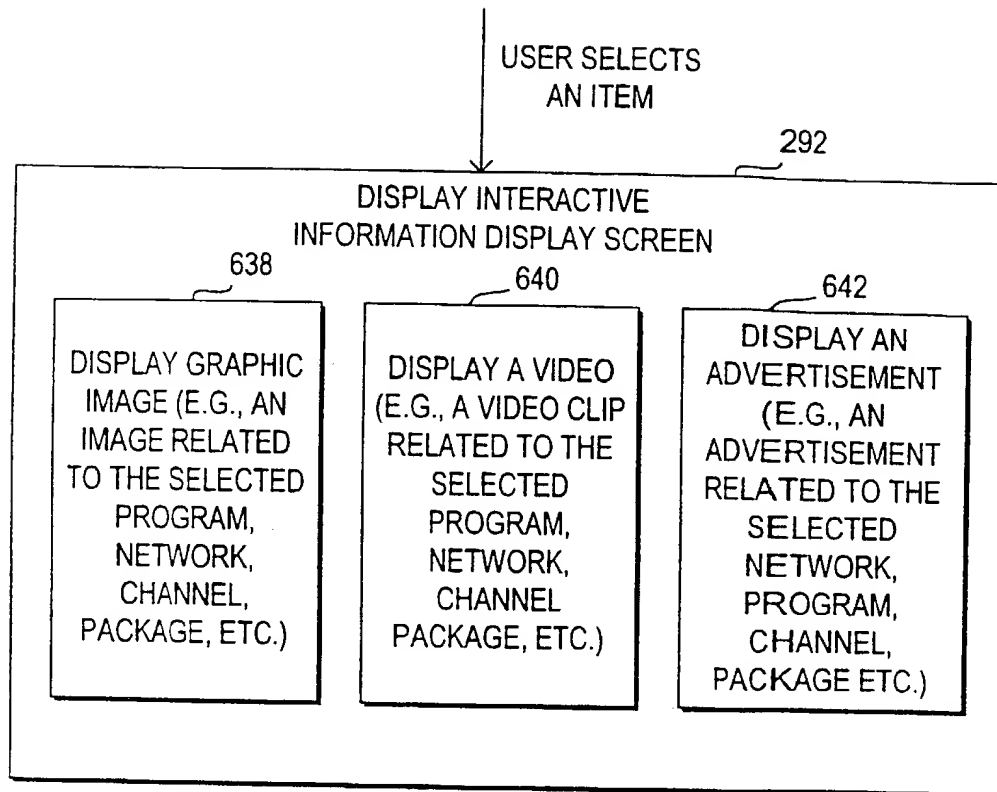


FIG. 27

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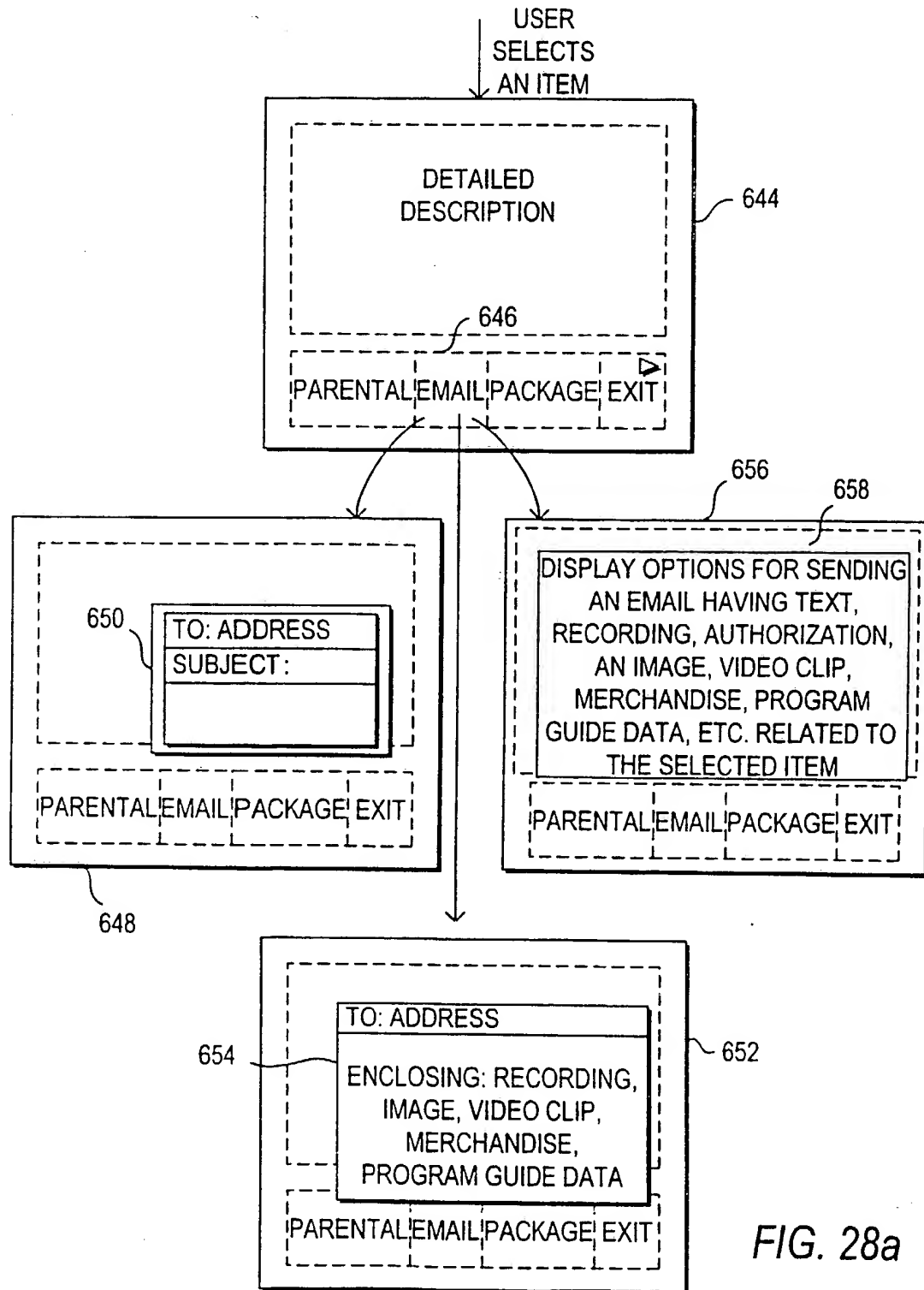


FIG. 28a

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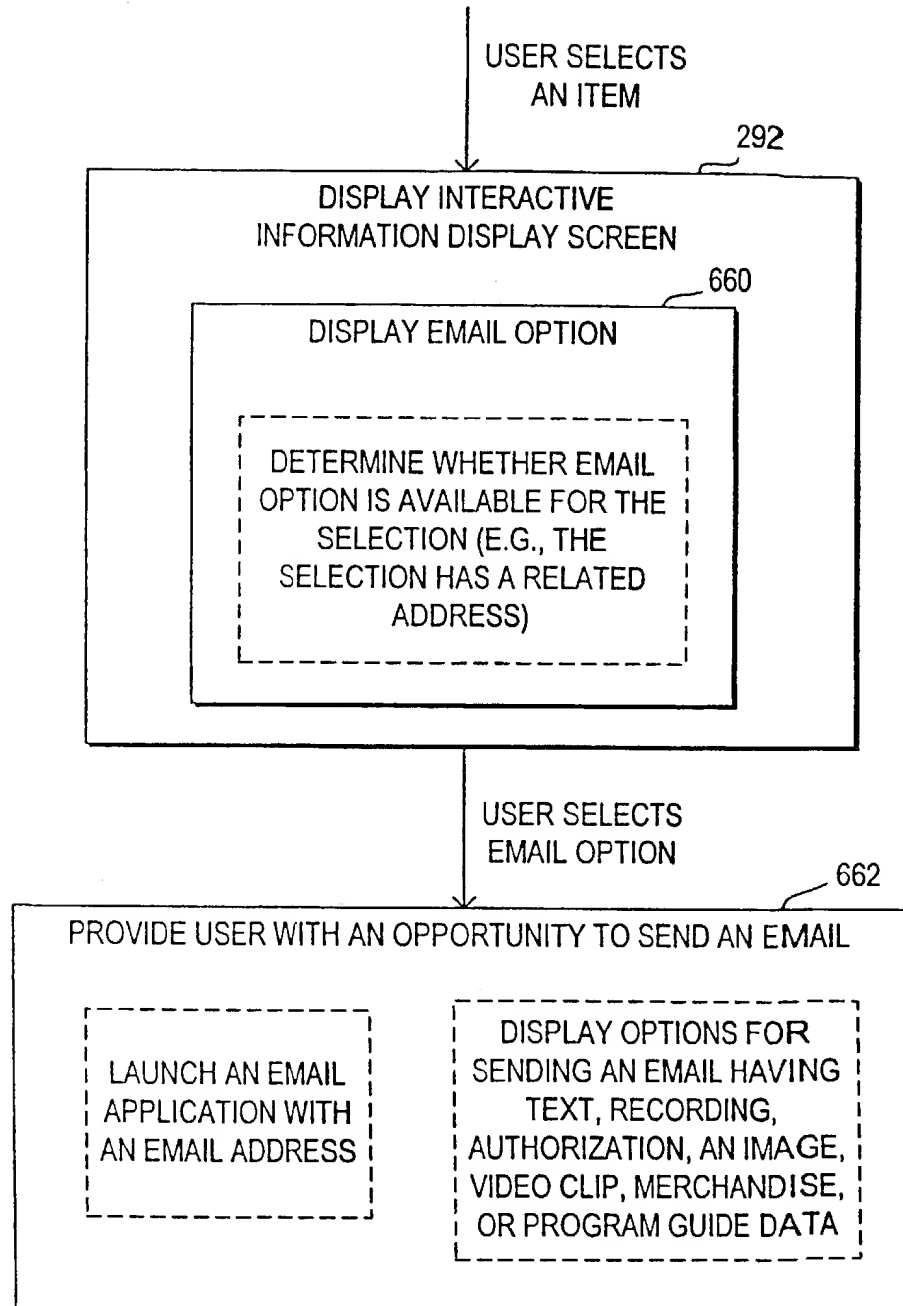


FIG. 28b

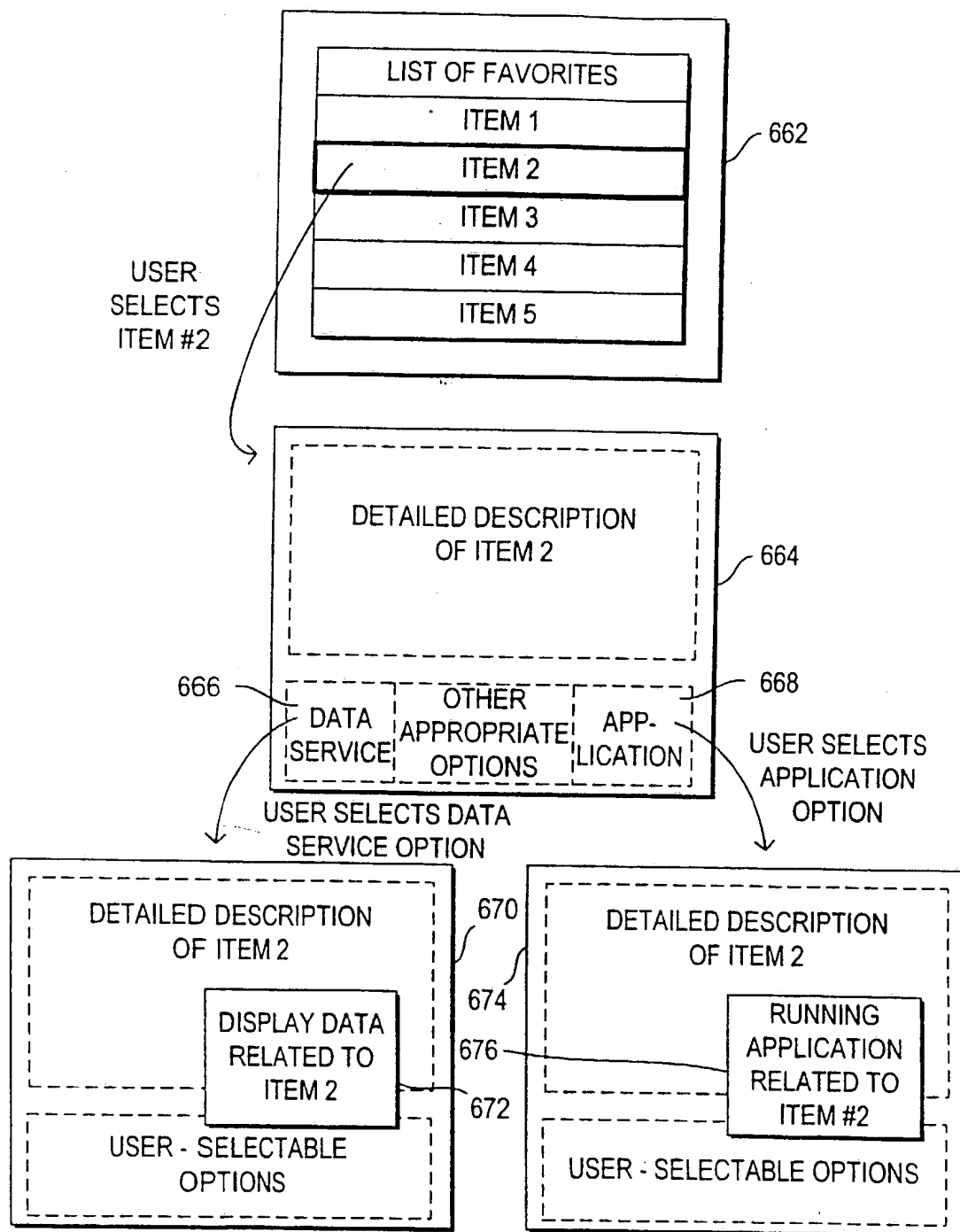


FIG. 29a



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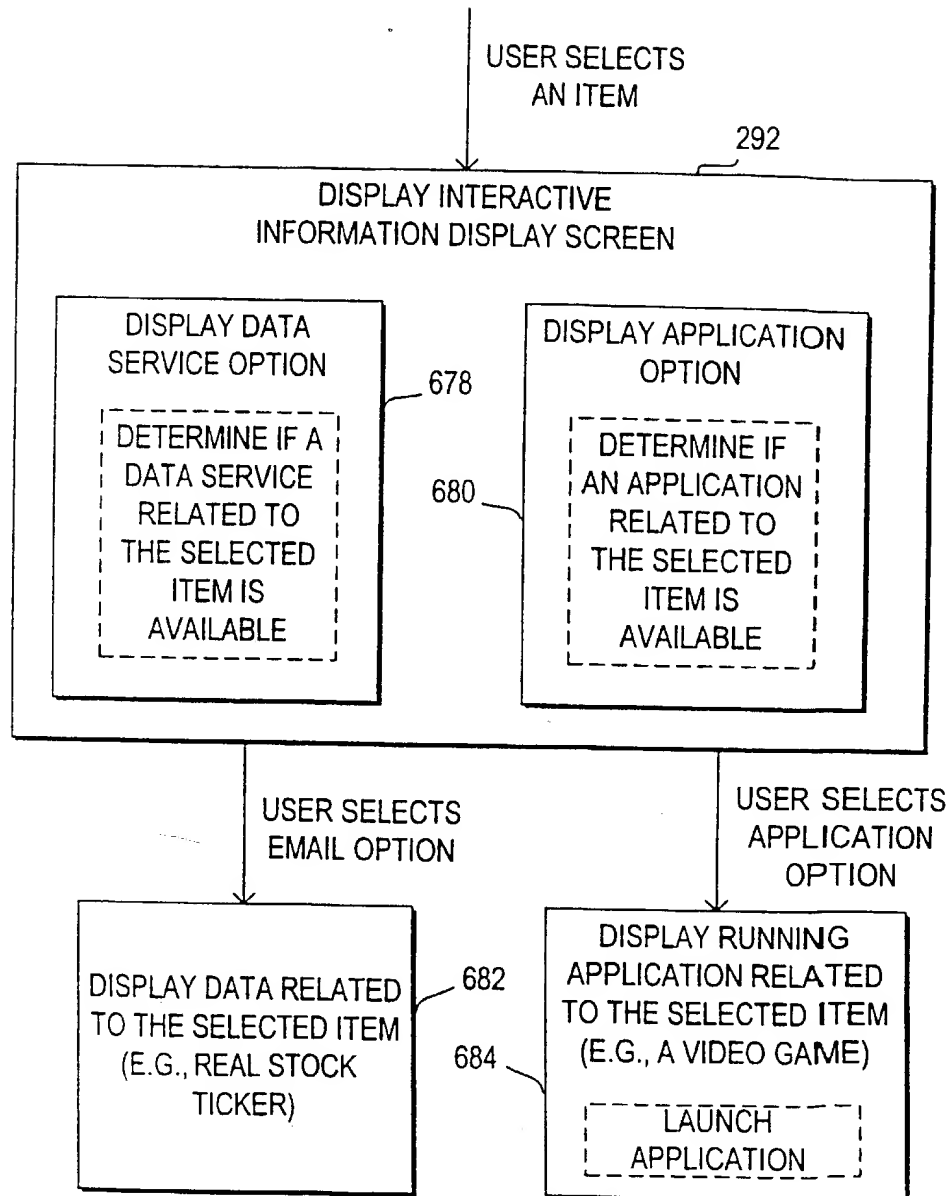


FIG. 29b

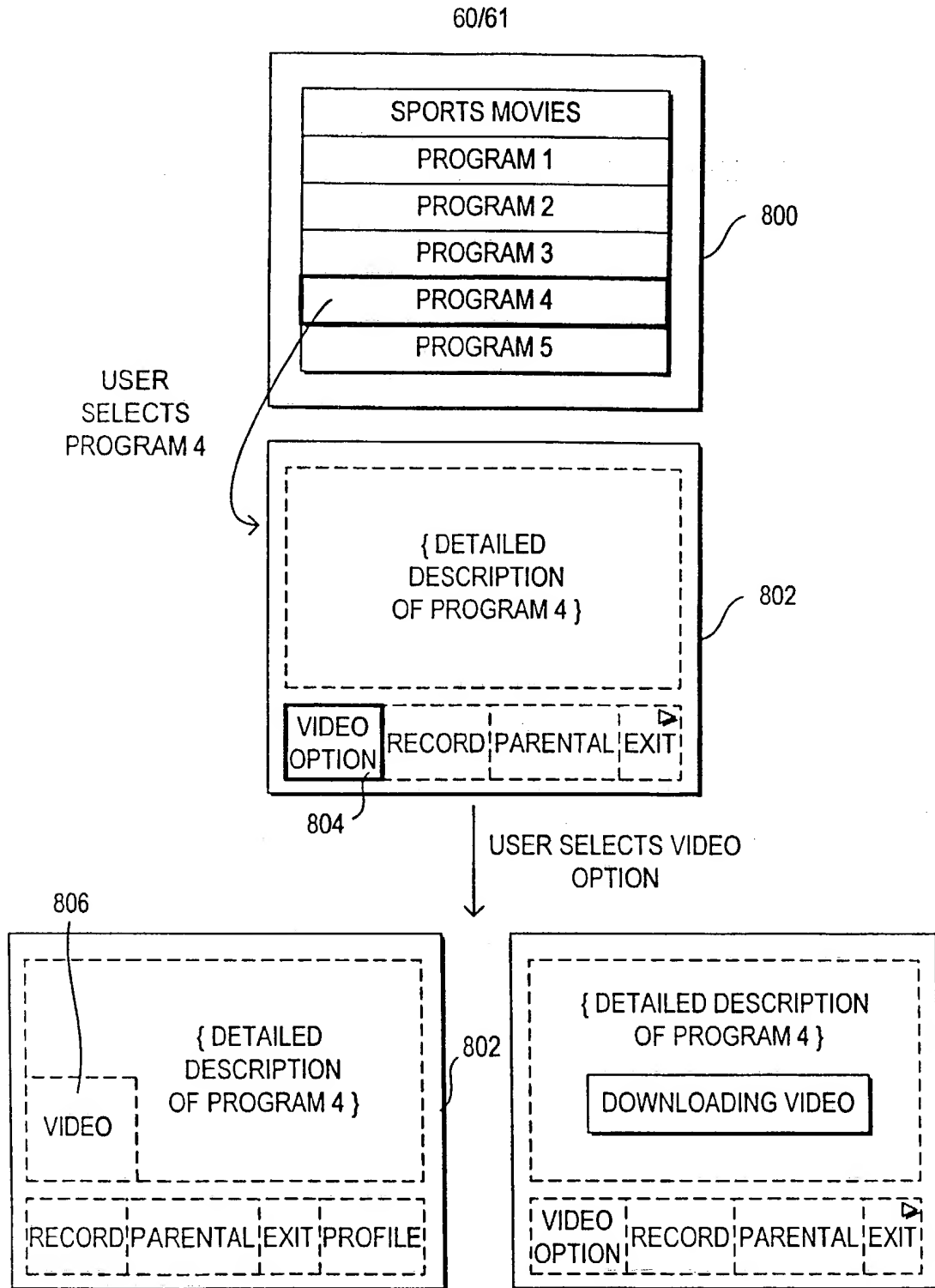


FIG. 30a

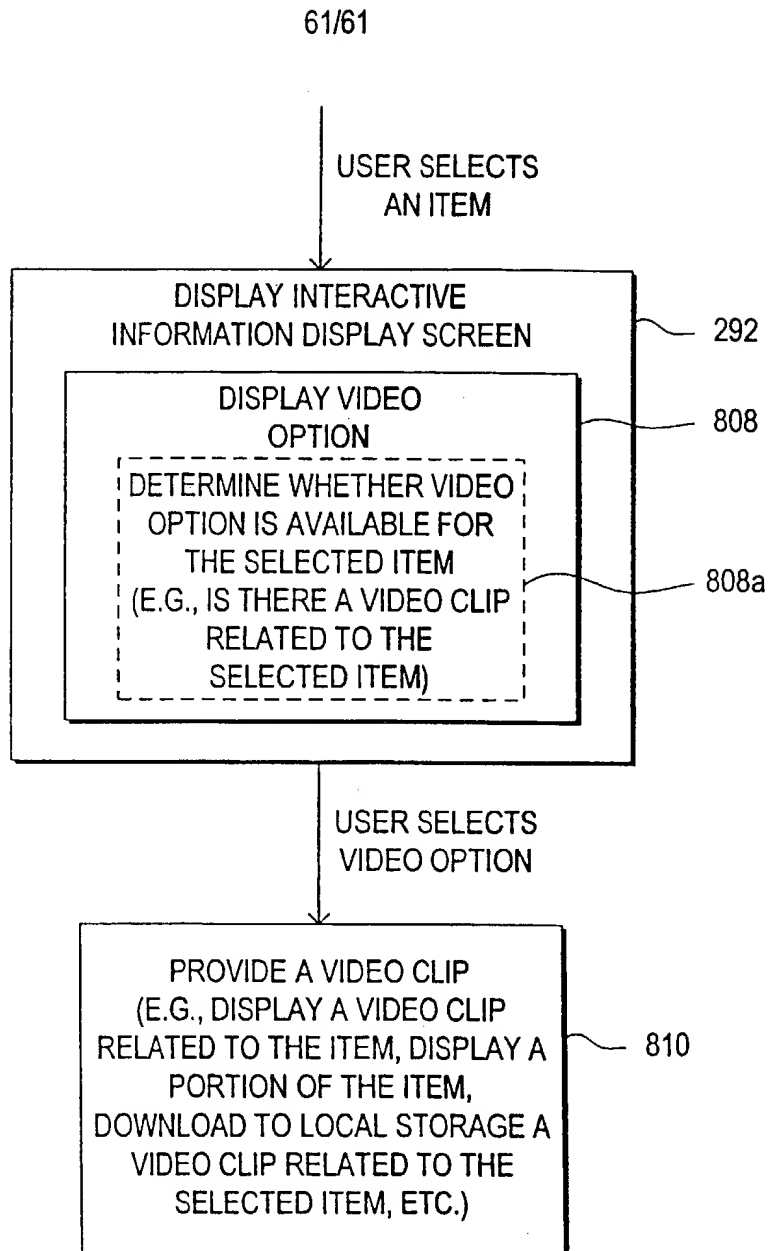


FIG. 30b

## INTERNATIONAL SEARCH REPORT

Int'l Application No  
PCT/US 99/26835A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04N5/445

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 854 645 A (TEXAS INSTRUMENTS INC) 22 July 1998 (1998-07-22)  -/-	1-6, 10, 11, 21, 57-63, 74, 75, 77-79, 83-100, 110-117, 135-137, 141, 144-153, 169, 176-181, 183, 184, 211, 220, 221, 240-247, 257, 258, 260-262, 266-283,

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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Date of the actual completion of the international search

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International Application No.  
PCT/US 99/26835

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